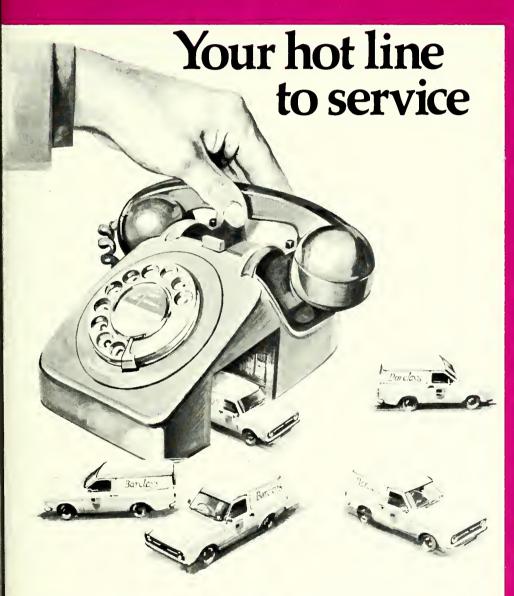
# CHEMIST? DRUGGIST

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Assurance on 'pill' supplies after ASTMS boycott threat

Why UK drug makers must raise their export prices

Importance of bioavailability in practice

Companies and profits

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# CHEMIST DRUGGIST

**Incorporating Retail Chemist** 

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#### COMMENT

#### Delay and confusion

After February's uproar in the profession and the industry, questions in the House, and a retreat by Government Ministers, it might have been thought that the second attempt to introduce the remaining Prescription Only requirements under the Medicines Act would have been handled with greater aplomb. Not so, it seems, for as we go to press on Wednesday (July 19), C&D is still unable to inform subscribers of exactly what will be required of them after the Medicines (Prescription Only) Amendment Order 1978 runs out on August 10.

Ostensibly the order gave general practice pharmacists six months breathing space to assimilate the more bizarre effects of the POM legislation with which they had been acquainted only two weeks before the February 1 operative date-effects such as the overnight change of products from OTC sale to prescription only simply because of the number of doses per day prescribed. Yet here we are again, only three weeks away from POM-Day, and still there are no final drafts of the anticipated amending Order in the

hands of organisations such as NPA.

There would be little cause for concern were there to be no new Order-that is, that the delayed February Regulations would now come into effect as the "transitional" Order ran out. But the six months has been used by many interested parties to seek changes in the legislation. Some appear to have been successful and have put out statements to pharmacists accordingly, Collis Brown's and Pharmaton being examples; others have changed labels, reformulated (we believe there may even have been a re-reformulation!) or simply decided to withdraw from the market. Some manufacturers and suppliers have been very helpful in advising the trade, but once again it looks as though the retail pharmacist is to be a victim of his own professionalism and adaptabilityindustry gets months and sometimes years to effect a change, the pharmacist is expected to comply almost instantaneously.

However, all will not be plain sailing even when the dust has settled on the amending Order. The C&D Price Service is regularly discovering anomalies, and the industry does not always help by confusing the POM legislation with the prescription only effects of other legal requirements. Thus we have an aspirin product intended for dispensing which may not be sold over the counter because it does not have child-resistant packaging. There are also many products returned as "POM" by manufacturers because they had no intention of OTC promotion and therefore sought only a prescription licence under the Medicines Act—even though the ingredients might signify a GSL category. We are continuing to eliminate such inconsistencies in the List but inevitably the sales restriction category will often depend as much on the way the pharmacist issues the product—packaging, labelling dosage, etc-as on the inherent category of the medication itself. Altogether an unhappy state of affairs!

May we appeal to all manufacturers and suppliers whose products are affected by the promised Order to notify the C&D Price Service, as a matter of urgency, of any changes in legal status that will result. We also require to know of formulation, labelling or dosage changes that have been undertaken to bring products into line with this and

previous Orders.

# POM details are still awaited

It was understood as C&D went to press that pharmaceutical organisations were still awaiting final details of the Prescription Only regulations due to come into force on August 11. However, the National Pharmaceutical Association expects that the draft Statutory Instruments would be published on July 21. The Orders, under Part III of the Medicines Act, were intended to come into effect by August 10 to connect with the expiry on that date of the transitional exemption for products covered by the Medicines (Prescription Only) Amendment Order 1978. The SIs have to be approved by Parliament but it is believed that the contents are similar to those proposed in a consultation letter MLX103, issued by the Department of Health in May, and subject to some minor changes. (Comment, p127).

**Emergency supplies** 

The Pharmaceutical Services Negotiating Committee reminds contractors that the exemptions for emergency supplies of medicines—Regulation 6, The Medicines (Prescription Only) Order 1977—do not include supplies made to patients under Part II of the NHS Act 1977. Any emergency supplies made under the Medicines (Prescription Only) Order 1977 should be treated as private dispensing.

Representations have been made to the Department of Health to extend the NHS Regulations but the position, at the moment, is that emergency supplies under the NHS can only be made where a doctor "personally known to the chemist requests him by telephone or in writing to dispense a drug in the case of urgency before a prescription form is issued and undertakes to furnish him, within 24 hours, with a signed prescription form therefor," (Schedule 4, NHS General Medical and Pharmaceutical Services Regulations 1974).

PSNC has also issued a reminder to pharmacists on the Drug Tariff inclusion of Tubigrip (stockinette elasticated surgical tubular). Sizes B, 6.2 cm wide (previously G4), D, 7.5 cm wide (G4X) and F, 10 cm wide (G5) only are available on FP10 in 0.5 metre and 1m packs. Sizes A, 3.5 cm, C 6.7 cm and E, 8.75 cm are *not* included in Part VI of the Drug Tariff. PSNC is pressing for all sizes to be available on FP10. The committee says that Tubigrip F is wrongly referred to as Tubigrip G in the July NHS Newsletter.

### Delay in the new ABPI code

The Association of the British Pharmaceutical Industry is postponing implementation of its revised Code of Practice on the marketing of prescription medicines, probably until March 1979. It was envisaged that the code would become operative in September.

The delay is to allow a comparative study of the code with the final version of the proposed Medicines (Advertising to Medical and Dental Practitioners) Regulations 1978 which are expected to be laid before Parliament shortly. Any further revisions to the code would be submitted to the half yearly ABPI meeting in October.

The ABPI says it has been negotiating with the Department of Health since the draft regulations were published but differences of opinion still remain concerning the maximum size allowable for an abbreviated advertisement in a professional publication and the type size to be used for non-proprietary names in advertisements. It is in those areas that the revised code and proposed regulations would differ.

# No progress over distribution plans

Representatives of the Pharmaceutical Services Negotiating Committee and Pharmaceutical Society's Council met last week to discuss the draft document on rational distribution of pharmacies. It is understood that no firm policy was decided and another meeting will take place in September.

# Plans for seventy more hypermarkets

Hypermarkets and superstores in the UK have grown from three in 1967 to 140 in 1977 and there are a further 70 in planning or construction stages, according to a Unit for Retailing Planning Information Ltd report. Most growth has occurred since 1972.

The report "Trading features of hypermarkets and superstores" by Peter M. Jones indicates that there are far more such stores in the North than in the South—Greater London and Southeast has seven, Southwest has two.

The overall conclusion from the survey is that earlier planning assumptions have not been justified. The linking turnover to floorspace is only partially supported; in many instances stores of similar floorspace have totally different turnovers (up to 100 per cent), possibly suggesting that company ownership is as great an influence as floorspace on turnover.

Total turnover of such stores in 1975 is estimated at £427 million representing 1.5 per cent of the national retail market. However, URPI say that the share could be 2.5 to 3 per cent for 1977 but is still a long way off some European countries. Average store turnover and sales were £4.56m and £4.51m—the difference suggesting the minor importance of services (repairs, cafés etc).

Opening hours largely operate on a five-day late night shopping basis. Most hypermarkets and superstores trade from Tuesdays to Saturdays. The report, number URPI U7, is available (£4.60 to sponsors, £7.80 non-sponsors) from URPI, 229 King's Road, Reading RG1 4LS.

#### Hair dyes 'cause chromosomal damage'

A greater level of chromosomal damage in the form of breaks and gaps has been seen in women who dyed their hair than in those who did not. This finding, published in *The Lancet* last week, suggests a direct genotoxic effect of hair dyes in women, say the authors from the Institute of Cancer Research, London, who carried out their study mainly in central London and Surrey.

However there was no increase in chromosomal damage in professional hair colourists, despite occupational exposure on average of 11,000 permanent and 5,000 semipermanent tints for women and 15,000 permanent and 6,000 semipermanent tints for men over one to 15 years. An explanation of this, say the authors, could be that hairdressers tend to wear gloves when tinting and if they do not, the horny surface of the hands and the lack of sebaceous glands could be an effective barrier. Percutaneous absorption of hair dye constituents through the scalp is often sufficient to allow detection of dyes or metabolites in the urine.

In men, however, the opposite effect was seen—those who dyed their hair suffered no chromosome damage, whereas the "undyed" group did. But the authors felt this finding could be a result of low exposure in the dyed group and a higher mean age in the "undyed" Toilet Preparations controls. The Federation said in a statement: "Even if taken at their face value, the toxicological significance of these reported results would be minimal. However, analysis of the paper raises serious questions concerning the data. The paper reports slightly increased chromosomal 'breaks and gaps' as from 7.2 per cent to 9.5 per cent. This is within the normal range for such 'breaks and gaps' of zero to 11 per cent which has been reported by several authors.

"According to a US Department of Health Education and Welfare report, chromosomal damage which is limited to breaks and gaps 'cannot be taken as an indication of heritable damage'. Such studies have also been shown to have a high number of false positives in terms of carcinogenicity. Messrs Kirkland and Venitt [authors of *The Lancet* paper], in an earlier paper, have reported that 'the significance of chromosomal damage with regard to long term genetic hazard or carcinogenic risk is far from clear'."

### Boycott of 'pill' urged over union recognition

Wyeth Laboratories have given their assurance that there will be no supply problems with Ovran, Ovran 30, and Ovranette despite union threats to boycott these products.

The Association of Scientific, Technical and Managerial Staffs is appealing to its women members to change to other brands because the company has refused to recognise the union for its

medical representatives.

Mr P. Fennimore, Wyeth's commercial director, told C&D on Tuesday that the Advisory, Conciliation and Arbitration Service recommended earlier this year that the company should recognise ASTMS but Wyeth decided not to do so as only a third of the sales force were members. Other relevant unions were already recognised. Mr Fennimore said the company "bitterly regretted" the ASTMS action which was felt to go against the wishes of the medical representatives, none of whom wanted to take industrial action. He added that there was no risk of other unions "blacking" production of the company's products.

Press reports early this week quoted an ASTMS official as saying the union would be seeking support from its "pharmaceutical members in hospitals and clinics," but a Guild of Hospital Pharmacists spokesman told C&D on Tuesday that no approach had yet been

On Wednesday, an ASTMS spokesman said precise plans were still being formulated.

Value of Guild's political levy

The importance of Parliamentary representation was expressed at this month's Guild of Hospital Pharmacists Council meeting. Ms Donna Haber, Association of Scientific, Technical and Managerial Staffs divisional officer, urged Guild members to contribute to the political levy following circulation of details of a speech by Mr D. Hyde, Member of Parliament and ASTMS president, in the House of Commons pharmacy debate recently. He had asked the Minister for Health to provide additional funds for the implementation of HM(70)36, "Measures for controlling drugs in the wards", the servicing of Drug and Therapeutics Committees and the application of the Medicines Act 1968 to health authorities HSC(IS) 128 et seq particularly on quality assurance.

Ms Haber informed Council that Mr Eric Deakins, Parliamentary Under-secretary of State, would meet the Salaries Committee to discuss the top post review. The recent salary award appeared to be well received, although there was disappointment that the only regional specialists to qualify for grade IV were those engaged in quality control work.

A draft document on the storage and safety of medicines in hospital was expected in a week or so, and it was believed that a new building note on pharmacy departments would soon be appearing. The report of the Supply Board Working Group HC(78)21, made references to pharmacy but unfortunately the group included no pharmaceutical representation. Council expressed concern at this failure to include a pharmacist when matters affecting pharmacy were likely to be discussed.

Council was informed that the vacant post of area pharmaceutical officer, Northamptonshire Area Health Authority, had been filled but no progress had been made in the appointments of APhO to Clwyd and Gwyne'dd.

Council had invited Mr P. Sharrott to present his Janssen Award paper on the need for an extended hours service (C&D, June 17, p980). The paper was well received, provoked much discussion and no disagreement. It was accepted that in many hospitals the need for a longer pharmaceutical working day to provide additive, dispensing and information services was essential for proper patient care. A residency service giving full 24 hour coverage would probably be the most satisfactory manner in which to undertake this work and the Guild should look forward to the recruitment of more pharmacists to perform these duties. Some form of extra remuneration should be made available for those who work unsocial hours.

It was announced that Mr J. W. B.

Fish (district member, South Eastern), area pharmacist to the Kent Area Health Authority, a long serving member of Guild Council, would be retiring from his post in the near future.

#### Ten pharmacies lost

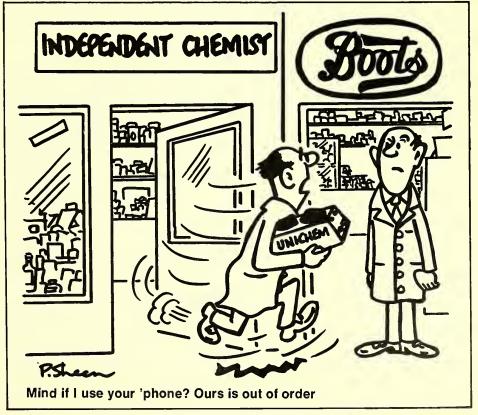
There was a net loss of 10 pharmacies from the Pharmaceutical Society's Register of Premises in June. In England 17 closed down, one of which was in London, and 13 opened up, four being London. In Scotland six pharmacies closed down.

#### DITB award for ICML

Independent Chemists Marketing Ltd, have been awarded a Distributive Industry Training Award. Mr A. G. Trotman, ICML managing director, says "naturally, we are pleased." The award recognises that ICML carry out training programmes for Numark retailers and wholesalers. During the past year alone 200 people have attended Numark training sessions, covering shop staff duties, sales force training, shop developments, retail management and merchandising.

#### Sponsored rides to save hearts

The second National Sponsored Cycling Campaign run by the British Heart Foundation begins on August 1. The campaign is to raise funds for research into heart disease. First prize for the top money raiser is a holiday for two in Greece. Posters and sponsor forms are available from the British Heart Foundation, National Sponsored Cycling Campaign, 57 Gloucester Place, London W1H 4DH. The campaign runs until September 30.



# Men still prefer the aerosol deodorants

Aerosol deodorants are losing share to roll-ons although men appear to prefer aerosols, says the latest Mintel report. Over the past few years the deodorant market has remained much the same size but within the total of sales (80-85 million units, or £35m in 1977 at retail prices) there has been a trend away from aerosols, attributable to women changing to roll-ons.

Trade estimates suggested that 60 per cent of men now use deodorants, compared to 50 per cent at the time of the last Mintel consumer survey, in 1974. When nearly 1,000 men were asked how often they used deodorant, 37 per cent said on most days, and 23 per cent said on special occasions only. They were never used by 39 per cent, only 1 per cent were "don't knows."

In the after-shave sector of the market, sales which had been particularly good in 1976 fell 10 per cent to 19m units in 1977, although value had risen by 8 per cent to £20m on retail prices. The figures were explained by polarisation of the market, with some medium-price brands dropping out.

Of those interviewed 36 per cent said they used after-shave on most days and 30 per cent said on special occasions only. As with deodorants, all but 1 per cent of the remainder were certain that they never used after-shave at all.

The socio-economic and demographic breakdown of the replies showed surprisingly that the youngest age group of 15-to-24-year-olds contained only an average number of those who used aftershave regularly (that is on most days).

The report says the market for men's hairdressings has been in decline for a number of years. Changing men's hair fashions had reduced the use of

creams and gels, which were unsuitable for the longer styles, and hairsprays had found little acceptance among men.

Sales at retail prices in 1977 were £11.7m which showed a small growth over 1976 in value terms, but volume had declined. In the consumer interviews of nearly 1,000 men 5 per cent said they were users of hairsprays on most days, and a further 12 per cent were occasional users. But 82 per cent of men never use a hairspray.

Mintel reports are available (£30 per month, £130 per year) from 20 Buckingham Street, Strand, London WC2.

# New market data from AGB panel

AGB Research are launching a new marketing tool, Index, which will provide continuous data on personal finance and discretionary spending derived from a 10,000-strong consumer panel. Panel members will report monthly on all payments and purchases over £3, but for the first time it will be possible to cross-relate purchases (by product category) with the individual's personal financial holdings, average price paid, method of payment (cash, cheque, credit card etc) and place of purchase—in addition to the brand analysis usually available from panel surveys.

Two separate sample panels will give similar, but more detailed, information in relation to new home owners and recently married couples. All national reports will be available monthly, with nine ITV-region breakdowns offered on a quarterly basis. Among the basic reports will be one on consumer durables, which will include items such

as hair appliances, shavers and photographic equipment. Details of the service and cost are available from Audits of Great Britain Ltd, Audit House, Eastcote, Middlesex HA4 9LT.

# Optrex agree to hold prices

The Price Commission has accepted an undertaking by Optrex Ltd not to increase prices of their branded eye preparations before the end of the year. Mr Roy Hattesley, Secretary for Prices, said in reply to a Parliamentary question that no order would be made against the company.

#### Signs for disabled

The Retail Consortium has told the Minister for the Disabled, Mr Alf Morris, that retailers would welcome a standard sign for shops indicating there are special aids available inside for disabled people. Mr Morris had written to the Consortium as part of a campaign to improve access to shops for the disabled. He suggested special check-out arrangements, more seats and staff to help the blind and deaf with shopping. The Consortium member associations have agreed to consider the proposal.

#### NHS drugs costs

The value of drugs dispensed by pharmacists in the financial year 1969-70 was £141m, in 1973-74, £156m and in 1976-77, £173m. Mr Roland Moyle, Minister for Health, replying to a question by Mr David Knox, said these figures excluded fees and allowances paid to pharmacists but included income from prescription charges. Mr Moyle said there were no plans at present to change the categories of exemption from prescription charges but it was the Government's intention to consider further steps in the progressive abolition of charges when resources permitted.

#### More MPs sign

By Tuesday 183 MPs had signed the motion calling for grants for GPs to study homoeopathy and 87 had signed the motion calling for a Royal Commision on the use of animals for scientific purposes.

# Babies' feeding bottles on display

A collection of baby-feeding implements dating from the early 18th century is on display at Forty Hall, Forty Hill, Enfield until August 14. It will then start a tour of museums throughout the country.

The 120 items include pap boats, bubby pots, sucking bottles, teats, breast pumps and nipple shields, in pewter, glass, porcelain and silver. The collection is owned by Cow & Gate Babyfoods Ltd and has a permanent home at their headquarters in Trowbridge.





Before and after views of Bjorn Borg who removed his fourteen day growth with a Wilkinson Sword bonded razor. He promised that once he had successfully defended his Wimbledon title, he would remove his beard before he celebrated

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So not only does the denture wearer profit from Dentu-Creme.

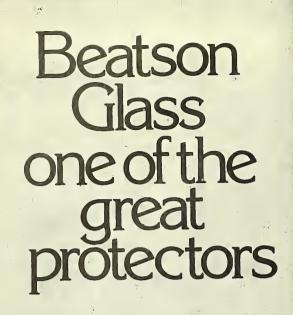
But you do too.

And profit is always something worth sinking your teeth into.

Whether they're your own, or not.



STAFFORD-MILLER Quality products for dental health.





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How to produce advertise~ ment

A Benn publication



#### **PEOPLE**

Mr J. Dale, MPS, retires on July 28 after 15 years as the chief inspector of the Pharmaceutical Society. Paying tribute to Mr Dale at last week's Statutory Committee meeting, Sir Gordon Willmer, chairman, said it was the last time he would have the benefit of Mr Dale's guidance as head of the law department. "I have been in this chair for eight years and he has done wonders in guiding my footsteps in the complexities of pharmacy", he said. Mr E. Brocklehurst, member of Council, said he had been "impressed by the fairness and kindness shown by Mr Dale in his handling of cases which could have been very unhappy." Mr Josselyn Hill, the Society's solicitor, said no one knew pharmacy as perfectly as Mr Dale. On the matter of ethics he could always put his finger on the right facts at the right moment. Mr Dale has been an inspector since 1952 and chief inspector since 1963.

Miss Margaret Lawrence, managing director of Smith & Nephew Cosmetics Ltd and Nivea Toiletries, has been elected to the council of the Incorporated Society of British Advertisers, where she will represent toiletry interests. Miss Lawrence is the first woman to be elected to the ISBA council. She started her marketing career with Colgate-Palmolive, and has been with Smith & Nephew since 1965, joining the boards of the toiletries division in 1972 and of the Gala Group's main operating company the following year. Miss Lawrence became UK sales and marketing director in 1975, and was appointed managing director of the newly created company, Smith & Nephew Cosmetics Ltd last year.

Madame Nelly Baudrihaye has been appointed director-general of the recently formed European Federation of Pharmaceutical Industry Associations. Madame Baudrihaye, 49, who qualified in pharmacy at Liege University, Belgium, has been president of the Belgium Pharmaceutical Industry Association since 1976.

Mr Danny Walsh, manager of Roche Products Ltd in Ireland, has retired owing to health reasons. He will continue to act as a consultant for Roche in Ireland. Mr Walsh has been with Roche for 22 years, beginning as a representative.

#### Deaths

**Beardsley:** Mr Leslie Arthur Beardsley, MPS, of Bridgnorth, Salop, at the age of 73. He owned shops at Broeley and Oakengates, Telford, but retired from business two years ago.

Hill: Mr Sam Hill, MPS, Brookfield Pharmacy, Longcliffe Road, Preston, Lancs. He had practised as a pharmacist and optician in Motherwell, Lanarks, for several years and was a lay preacher for the Roman Road Hall and Ebenezer Hall religious groups.

#### **TOPICAL REFLECTIONS**

by Xrayser

Missing my target

As you will have noted in last week's editorial, I have just had a good clout round the ear for my criticism of the way the West Glamorgan issue was handled. With hindsight, I realise that in casting around for someone to blame for what I consider an ill-judged action, I unintentionally encompassed the executives who were not really in a position to hit back. That is unfair and I apologise. I am sorry.

Yet I am not an enemy of the PSNC, nor of its officers. But neither am I a politician, my small business and family commitments leave too little money for me to afford that. I am just a contractor who, because he pays for it, thinks he has a right to criticise PSNC when it appears to have precipitated a schism which can only weaken us. Let me make it clear that I consider West Glamorgan's action barely understandable—and then only if we assume a lack of knowledge on their part. How they think withholding their £1,400 is going to strengthen our position is beyond me. Their emotions are right; their target unbelievably wrong. Here of course I share a common interest with West Glamorgan, but how are we to know our targets? If I am misinformed, then either I have missed some essential paragraph in the professional Press or our information distribution is inadequate. In other words, "we don't communicate too good!" Looking at West Glamorgan, I imagine that must be the answer.

When I was first asked to write this column I was apprehensive, having little knowledge of the administrative side of the contract. All I knew was that I was facing an increasing cash flow problem, with normal replacement of dispensary stock becoming impossible. I thought the fault lay in the way we negotiated, and felt a "paid negotiator might do better". Others similarly troubled, looked to unions etc. After some agitation we were told, "But we have a paid negotiator already". Well, have we or haven't we?

Better understanding

I think it would be helpful if PSNC were to ask Mr Smith to guide contractors such as myself to a better understanding. C&D has been running a useful series on the technicalities of the contract (further articles will be published soon—Editor), but I should like to know more about the PSNC set-up and the role of the executive staff. Do they "negotiate" for us or do they merely provide the committee with background knowledge, figures, etc, and introduce members to spheres of influence? The Editor in his Comment last week gave us one or two figures that had, I must admit, passed me by—if that is, they had been published at all before—and they suggest that PSNC hides too much of its light under a bushel. If that is so, can they wonder that we "grass roots" contractors accuse them of inactivity?

Naturally there must be certain information which will have to remain "classified", but surely it should not be beyond us to devise some means for communicating that which cannot safely be put into print. I noted in C&D a few weeks ago that one of PSNC's elected members, Mr Coleman, held a meeting for the chairman and secretaries of the LPCs in his area, at which he briefed them on the new forthcoming policy document on rational location of pharmacies. To me that seems an example other PSNC members might usefully emulate—then we'd at least have a couple of local contractors to whom we could turn when exasperation gets the better of us.

Leadership, as I see it, should aim at generating within our profession a desire and the means to act as one. With this achieved we shall have sufficient power to support reasonable negotiations, but surely we all need to know what we are about. Writing this column gives me a fabulous opportunity to beat, cajole, praise, learn from, follow, perhaps even on occasion to assist (though always to support) those leaders who are striving for the advancement of our profession and survival of its retail sector. It says a lot for the Editor that his brief to me is without parameters.

# A need for higher export prices in the drug industry

UK drug companies must raise their export prices more rapidly if full advantage is to be taken of the economic situation, warns a report recently published. The ICC Business Ratio report on pharmaceutical manufacturers says that export price increases have lagged behind home and import prices. That may not have mattered too much during the three years when the pound was weak but with a stable pound companies would have to pay more attention.

The study involving almost 100 leading companies suggests profits have risen by 59 per cent over the past three years while sales have increased by 49 per cent. Whilst such a performance is good it does not compare favourably with official statistics, which show that sales growth has almost entirely been obtained by price increases with volume rising by 8.3 per cent over a period of 39 months, says the report. The trade balance in value terms has remained static despite import value falling and export volume rising 10 per cent. Against that background, the report says, the 49 per cent sales increase is less than would be expected against a volume growth of 8.3 per cent and prices rises of 65 to 74.5 per cent.

In terms of return on capital employed, the companies analysed reduced their profitability in the first half of the period reviewed but more than fully recovered in the second half. Overall, the return on capital rose from 20.8 per cent in 1974-75 to 21.6 per cent in 1976-77.

The most profitable company in the report on the basis of return on capital is Duphar Laboratories, which achieved a return of 120.9 per cent in 1976-77, followed by Nicholas Laboratories, 117.4 per cent, and Howard Lloyd & Co 100.1 per cent. Twenty companies showed a return on capital employed of more than 40 per cent in the final year of the report.

#### Margins improved

After analysis of their performances the report concludes that they operate on high margins, turn over their stock rapidly, have longer than average industry credit periods, normally export an above average proportion of sales and show fast sales growth. Average profit margins have improved over the three years from 11.5 to 12.2 per cent.

Highest margins were Westminster Laboratories, 47.5 per cent, Allen & Hanburys 37.6 per cent and Howard Lloyd & Co 31.5 per cent.

Stock turnover was marginally higher—improving from an average of 3.5 to 3.8. Westminster Laboratories turned

its stock 12.9 times in 1976-77—the best performance among manufacturers. However among marketing companies, Schering Chemicals achieved 33.8, and Kabivitrum, 17.3.

Average credit periods fell by two days to 86 days but this masks a wide diversity of experience. Best among the manufacturers were Avlex and Merck, Sharp & Dohme, allowing an average 26 days to customers in 1977.

Among manufacturing companies nine managed to achieve annual sales growth rates of more than 30 per cent. Nicholas Laboratories achieved 81.2 per cent, DDSA Pharmaceuticals 51.7 per cent, Stiefel Laboratories (UK) 48.1 per cent and Avlex 40.8 per cent.

An analysis of the data provided by the report shows that overseas companies are generally more capital intensive per employee than UK companies. Average capital employed per worker in 1976-77 by British companies was £6,435 compared with £9,990 for the industry as a whole. Bridge Chemicals, a subsidiary of Smith Kline of USA, had capital employed per employee of £30,939 in the final year. Remuneration showed a similar trend.

Independent British manufacturing companies recorded an average of £14,010 of sales per employee last year compared with £20,042 for the industry as a whole. Similarly British companies achieved average profits per employee

Mrs Norma Gregory, winner of Clearasil's "Touch of luxury" competition, taking a celebratory glass of Champagne with her husband, John Gregory MPS, of Arches Pharmacy, Dursley, Glos. Mrs Gregory's prize was an expenses paid weekend for two to be spent at the London Hilton hotel and an evening at the Talk of the Town where she was to be presented with a watch



of £1,570 in 1976-77 while the industry average was £2,139.

For the future the report suggests that the upward trend in return on capital should be encouraged for an industry which needs to finance high research and development, requiring a return significantly above prevailing inflation and interest rates. The UK could expand its pharmaceutical trade in the world, because its attractions as a manufacturing base are already apparent from the export ratio of overseas subsidiaries. The report is available (£50) from Inter Company Comparisons Business Ratios, 81 City Road, London EC1Y 1BD.

# ABPI reports high exports ratio

The Association of the British Pharmaceutical Industry says in its annual report that the ratio of exports to imports of 3.2 to one achieved by the pharmaceutical industry was the second highest in the world league table. The stabilisation of the pound did not appear to have had too much effect on the industry's export performance.

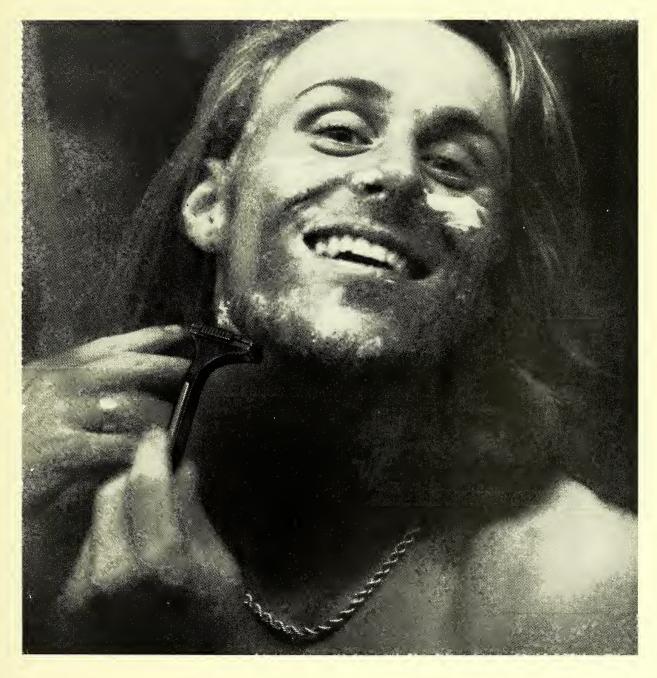
In his foreword, ABPI president, Mr F. Goulding, says the pharmaceutical industry could not be included in criticisms that British industry was not able to compete in world markets with other countries. He points out that on average, every man and woman working in the pharmaceutical industry contributed over £7,000 of exports in 1977.

He says it is vital that innovation should be encouraged to the fullest possible extent and unnecessary barriers to research, development and marketing of new medicines must not be created. The industry accepts that legislation is necessary in many areas of health care but the danger is that legislation and regulations become self-perpetuating and the pendulum can swing too far so that instead of protecting and assisting patients and consumers, the opposite effect is achieved. Legislation then becomes detrimental rather than beneficial, he says. As responsible members of society the industry has an obligation to ensure as far as possible that a proper balance and perspective is achieved.

#### Chemicals growth

The turnover of the UK chemical industry (excluding fibres) increased by 16.2 per cent to £13.4 million in 1977 (£11.5m in 1976) with £3.9m exported (up 27 per cent), according to figures in the European Council of Chemical Manufacturers' Federations annual report, published recently. The UK accounted for 16.86 per cent of the Western Europe chemicals turnover (16.3 per cent in 1976) and showed a 4.7 per cent annual growth rate during the period 1967-77. The growth rate for all manufacturing industry for the same period was 1.5 per cent. Copies of the report are available from publications department, Chemical Industries Association, 93 Albert Embankment, London SE1.

# Meeting of today's Champions: Björn Borg meets Wilkinson Sword





The name on the world's finest blades.

# COUNTERPOINTS

# Shulton's Mandate sings Sacha's song

Shulton (GB) Ltd are spending £145,000 on television to launch Mandate, their new men's range. Sacha Distel, the singer, will feature in the commercials saying "Mandate even sings my songs. It says a lot for a man".

The television launch, in the London area, starts in early November and continues until December 22. The range comprises after shave (£3.95); Cologne (£4.25); deodorant spray (£1.65) and

stick (£1.65); talc (£1.65); soap (£1.75) and foam shave (£1.65). There are two gift sets—after shave and talc (£6.15), and after shave and deodorant spray (£6.15). Point of sale material is available featuring Sacha Distel who says that in the past he has always refused to endorse products but agreed to support Mandate because he believes in it. Shulton (GB) Ltd, 100 Brompton Road, London SW3 1EW.

New Complan on test in South New Complan, an "easy-mix" granulated

New Complan, an "easy-mix" granulated product is to be test marketed in the Southern television area where it will replace the powder version. The granules can be spooned into hot water and will dissolve almost instantly. The 400g carton (£0.92) has been redesigned to give greater impact at point of sale and to convey a less medicinal image in line with the overall marketing strategy for Complan. The showcard, shelf edge and till sticker have also been redesigned to ensure brand recognition among established users but help stimulate interest and trial among non-users.

There will be two four-week bursts of television advertising for New Complan in October and February and a general interest magazine campaign from October through to the New Year. Farley Health Products, Torr Lane, Plymouth, Devon.

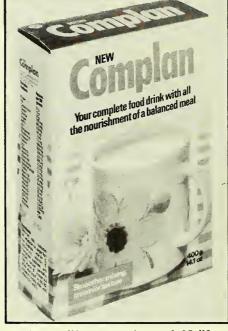
# Tudor support on television

Throughout August, Tudor's £450,000 advertising campaign to support their dealers moves into television, when two new advertisements will be shown on eight television areas including London.

The first will promote developing and printing, film, Post-a-photo and the recently launched Tudor photo bar. The second will promote Tudor's own brand film Tudorcolor which, when taken for processing via a Tudor dealer, is returned with a free album. Both these advertisements will carry the message: "Look for the shop with the Tudor rose on the door", and be supported on local radio and regional Press quoting dealers' names and addresses where appropriate. Tudor Processing Ltd, 30 Oxgate Lane Industrial Estate, London NW2 7HU.

#### Nail repair kit

John Walker, dispensing and manufacturing chemists, London, have introduced a product called Nailform (£2.25). The pack contains a manicure kit, finger



masks, Nailform powder and Nailform liquid. One application is said to repair broken or torn nails. It is a plastic liquid mixture which is painted on the nails like nail polish and it dries to a hard surface that is said to strengthen and protect the nail. It can be cut, filed and shaped. Instructions for use are included in the box. John Walker, 2 Medway Court, Leigh Street, London WC1.

#### Face-savers leaflets

Sterling Health have produced a leaflet for chemist assistants, giving details of the Face-savers range of three skin care products—skin conditioning wash, deep cleansing pads and cream medication. The company says that the leaflet is designed to help assistants advise their customers how to deal with skin problems ranging from the occasional spot to persistent spots and gives skin care programmes for all types of problem skins from dry to normal, oily and combination. The leaflet also contains general skin care hints. Sterling Health Products, Surbiton, Surrey KT6 4PH.

**Eumig credit** 

Eumig (UK) Ltd, have arranged a loan scheme with Barclays Bank Ltd, to help purchasers of their photographic equipment pay over an extended period. Purchasers would not have to bank with Barclays but may apply for a Barclayloan of up to £2,000 repayable over periods up to 36 months.

Leaflets will be sent out as part of a national advertising campaign but retailers may only hold loan forms on the premises if registered under the Consumer Credit Act and for debt counselling if they assist in the form's completion. Eumig/Barclay Loan Scheme, Barclays Bank Ltd, Brent Cross, London WW4 3FS.

#### Andrex advertising

Andrex is to be backed by Press advertising during August and September. The advertisement carries through the theme from the continuing television campaign, with the message; "soft, strong and very long". It will appear in full colour in Woman's Own, Woman's Realm, Woman's Weekly and Woman, and will also be featured in the August edition of Good Housekeeping and the September editions of Living, Family Circle, Home and Freezer Digest, Mother, Parents, She and Good Life. Bowater-Scott Corporation Ltd, Bowater House, 68 Knightsbridge, London SW1X 7LR.

Hedex display

Sterling Health have introduced a new chemist-only display unit for Hedex tablets. It is made of sturdy blue plastic and features a picture of a headache sufferer and the slogan "Hedex for headaches". It is designed to hold four sizes of the product, 16s, 24s, 40s and 72s. Sterling Health, Surbiton, Surrey.

#### Fontarel give away

During the summer months Fontarel Ltd are giving away a foam bath sachet to every purchaser of Woltz Italiana nail enamel. Point of sale material will accompany every order parcel and the offer will continue while stocks last. Fontarel Ltd, Servier House, Horsenden Lane South, Greenford, Middlesex.

#### Softaire shampoos

André Philippe have repackaged their Softaire shampoos (£0.39). The beer, herb, egg and lemon, and lanolin are now available in polythene stand-up tubes with seal proof caps, all tubes printed in matching colours for easy identification. André Philippe Ltd, 71 Gowan Avenue, London SW6.

Sunbeam Shapers for styling

Sunbeam Electric have produced a new range of hair care appliances called Sunbeam Shapers—four new electrical aids, "sleekly designed and elegantly packaged." Sunbeam's research showed that existing electrical aids were thought to be "old fashioned", "dull", "inadequate" and as "hardware" rather than a beauty aid and current packaging and advertising were thought "boring", says the company.

So with the help of a team of young designers and hair stylists, the company came up with Sunbeam Shapers. They also sought hair stylist's advice to design a hair care booklet to be packaged with each product. Photographs and diagrams show how each style can be achieved at home and there are hints on how to keep hair in good condition.

Sunbeam Shapers are individually designed and powered to do different jobs: Steam curl (£14.45), U dryer—(£14.95); straight and narrow styler—(£18.95) and soft brush dryer—(£21.95). Sunbeam Ltd, 9 The Street, Ashstead, Surrey KT1 2AD.

#### More Mr Men combs

John R Associates Ltd have introduced three new Mr Men Comb characters—Mr Funny, Mr Greedy and Mr Sneeze. Mr Silly and Mr Tickle remain in the collection, but Mr Nosey, Mr Forgetful and Mr Chatterbox are retiring from the scene.

Mr Men combs are shaped like a footprint, with a coloured tassle or cord attached to the big toe so that they can hang round the neck. One of the five characters is featured on each comb, together with a caption. "How do combs clean their teeth" from Mr Funny, "Don't let me catch cold" from Mr Sneeze and "Comb your hair after every meal" from Mr Greedy. The combs are available in units of 50 assorted characters (£12.50 trade, £0.45 each retail). John R Associates Ltd, 49 High Road, Bushey Heath, Herts.

#### Dettol cream on TV

After a Scottish television test, Reckitt & Colman have now commenced national advertising for Dettol cream. "The current sales position is causing great satisfaction," says Norman Thomason, marketing director, "and we can see excellent progress." Similar marketing policies, with the emphasis on a balance of above and below the line spending levels, to Dettol have been applied to the cream and awareness and penetration figures achieved in Scotland are said to

be high. Dettol itself is supported by over £600,000 television expenditure in 1978. Reckitt & Colman Products Ltd, Dansom Lane, Hull HU8 7DS.

#### Award for Pears

The current full colour Press campaign for A & F Pears soap has won one of the advertising industry's awards—a Clio, which is said to be the advertising equivalent of the cinema Oscar. The Clio was awarded for the best Press bath

products advertisement from amongst 8,000 entries. The advertising campaign was created by Pears agency, Foote, Cone and Belding. The advertisement, which has appeared largely in women's magazines, achieves its effect from a close-up of the transparent soap itself, with the headline: "If only you could see through some other soaps". The supporting copy emphasises the purity and gentleness of the soap. Elida Gibbs Ltd, PO Box 1DY, Portman Square, London W1A 1DY.



Over-the-counter sales of Migraleve are unaffected by any current legislation.

Over half a million prescriptions for Migraleve speak for themselves.

Migraleve ®



International Laboratories Ltd. Lincoln Way. Windmill Road. Sunbury-on-Thames, TW16 7HN.

# COUNTERPOINTS

# New lubricating jelly from Durex

Durex lubricating jelly (42g, £0.61) has been launched by LRC Products Ltd. A clear, odourless gel, it is designed as a vaginal lubricant. An advertising campaign starts in the autumn to explain the product to women who may be too embarrassed to discuss their problem with their doctors. Half-page advertisements will appear in Woman's Own, Woman's World, Cosmopolitan, Woman, True, Hers and New Love. There is an introductory trade bonus of 15 for 12. LRC Products Ltd, Sanitas House, Stockwell Green, London SW9 9JJ.



#### Optrex eye posters

Optrex Ltd are currently backing their range of eye care products with a four month national poster campaign. There will be three separate campaigns which will run simultaneously until October 15, followed by Eye Dew only until November 30.

The Optrex drops campaign shows the product in use with the line "Get the drop on . . ." and includes three posters featuring different eye indications-tired eyes, driving eyes, smokey eyes. Posters for Optone Crystal Clear highlights its toiletry usage, with the copyline "This woman is 34, her eyes are 21". Peter Pannel, marketing manager says, "Posters are part of our most ambitious ever drive to develop our eye care business both for new and existing products. Specifically, we're looking to the poster campaign to develop awareness quickly and stimulate trial, exploiting a clear positioning which the posters create for each brand." Optrex Ltd, City Way House, Basing View, Basingstoke, Hants.

#### Extra value from Freshaire sprays

A summer bonus for users of Cooper Freshaire regular range is the introduction of extra value aerosol sprays containing 225cc of the product against the old 180cc.

Cooper say that they have been able to give the consumer more Freshaire for their money because of the steadily increasing usage of the product throughout the spring. Wellcome Foundation Ltd, Temple Hill, Dartford, Kent.

# Kleenex link with Tom Caxton's

Kleenex for men is now running an onpack promotion featuring Tom Caxton's brew kits, each worth £0.59 (RSP). "This latest promotion is expected to be as popular as the recent Kleenex for men tissues and Gillette GII razor offer. The home brew kit for making eight pints of best bitter or lager is offered absolutely free on return of two special tear strips from Kleenex for men tissue packs now available throughout the trade," says Richard Huckerby, group product manager, Kimberly-Clark. The special pack is available in corrugates of 24 packs and outer units of 12 packs for the wholesale trade.

The company is also featuring an onpack 6p repeat purchase coupon until the end of the month. Kimberly-Clark Ltd, Larkfield, near Maidstone, Kent.

#### Two Sherleys POM

As Sherley's travel sickness tablets and sedative tablets will become Prescription Only Medicines on August 10 owing to their bromide content the company has decided to discontinue these two products. Full credit will be given against any remaining stocks held after August 10. Ashe Laboratories Ltd, Ashtree Works, Kingston Road, Leatherhead, Surrey KT22 7JZ.

#### Kattomeat backed

Spillers' Kattomeat brand is being backed by a new nationwide promotion followed by further television advertising. For the four week period commencing July 17 all three varieties of large size Kattomeat—meat, rabbit and turkey recipes—will carry a 5p off next purchase coupon. Overlapping the promotion in August is the start of the second burst of the nationwide television campaign first shown in May. Spillers Ltd, Old Change House, Cannon Street, London.

#### Bonus offer

The following rodenticides are on bonus until September—Dethmor, Rinoxin, Dithoxin and Pied Piper. Full details De Witt International Ltd, Sales Office, Seymour Road, London E10 7LX.

# PRESCRIPTION SPECIALITIES

#### DAKTARIN intravenous solution

Manufacturer Janssen Pharmaceutical Ltd, Janssen House, Chapel Street, Marlow, Bucks

**Description** 20ml ampoules containing sterile solution of miconazole 200mg.

Indications Treatment of systemic mycoses such as systemic candidosis, aspergillosis, blastomycosis

Contraindications In patients who have shown previous hypersensitivity.

Dosage By slow intravenous infusion over at least 30 minutes; diluted with sodium chloride injection or 5 per cent dextrose injection. Adults—usually 600mg three times daily; children—40mg per kg daily

**Precautions** Avoid in pregnant women. In vitro activity of miconazole antagonised by amphotericin and combination of the two drugs should be avoided.

Side effects Phlebitis, pruritus, nausea and vomiting, febrile reactions, rashes, drowsiness, diarrhoea, anorexia and flushes have been reported. See literature

Storage Shelf life of three years at or below room temperature

Packs 10×20ml ampoules (£12.24 trade)

Supply restrictions Prescription only; hospitals only

#### Larger Valium

The size of Valium 20mg ampoules will change from 4ml to 5ml with effect from August. Roche Products Ltd, Broadwater Road, Welwyn Garden City, Herts.

#### ON TV NEXT WEEK

Ln—London; M—Midlands; Lc—Lancashire; Y—Yorkshire; Sc—Scotland; WW—Wales and West; So—South, NE—North-east; A—Anglia; U—Ulster; We—Westward; B—Border; G—Grampian; E—Eireann; CI—Channel Island.

Alka Seltzer: All except M Anadin: All except U, E Andrex: All except Ln, U, E Camay: All areas Crest: All except E Dentu-creme: All areas Germolene: Lc Eau Jeune: All areas J&J baby lotion: M. Sc. So. NE

J&J baby lotion: M, Sc, So, NE, A, B J&J baby oil: M, Lc, Y, Sc, NE, B, G Maxi Dri: All areas

Maxi Dri: All areas
Pears shampoo: All areas
Poligrip: All areas
Savion: All areas
Setlers: All except E

Sweetex: All areas Wrights soaps: All areas

#### Wild flowers new from Yardley



Yardley have taken wild flowers as the theme of their latest range of soaps and talcum powders. Called the Woodland and Meadow collections each contains three fragrances inspired, says the company, "by the gentle notes of wild flowers in their natural habitat." The Woodland collection comprises gardenía, chamomile and mimosa and the Meadow collection includes honeysuckle, orchis and primrose. Both the soaps (£0.58 single tablet and £1.74 for a box of three) and the talc (100g £0.89) will be available for sale from the end of September. Yardley of London Ltd, 4 Miles Gray Road, Basildon, Essex.

Cabochard's first night

The first night audience of "Boo Hoo" at the Open Space Theatre in London on July 25 will be greeted by the scent of Cabochard perfume from Gres. Artistic director, Charles Marowitz has decided that in order to create the right atmosphere for his production—starring Janet Suzman, Georgina Hale and Estelle Kohler—the auditorium should be sprayed nightly with this scent. This effect has been used before when Diaghilev sprayed the auditorium and audiences at his productions with French perfumes. The company believes that Cabochard—at £21.00 an ounce—should make something of an impact. Buser & Co Ltd, 19 Great Portland Street, London W1N 5DB.

#### Heart Throb

After a year of test marketing in selected London shops the Electronic Jewellery Co Ltd have decided to put their product—Heart Throb—into national distribution. Heart Throbs, heart shaped objects which light up and begin to

flash after a short time, are available as pendants, key rings or brooches and come in many colours. The company says that research has shown that their sale has not been restricted to "trendy boutiques" but that the major purchasers tend to be women in the 25-45 age group. "Heart Throbs," they say, "are very much an impulse purchase and cause a quiet sensation at parties."

Two packs are being offered to retailers—the 25 unit (£49.95, value at rsp £75) and the 50 unit (£99). The company also says that they are constantly testing new products and ideas, and that the latest is one which can transfer a customer's signature to the surface of the Heart Throb—'so that they can see their name in lights!". The Electronic Jewellery Co Ltd, 10 Barley Mow Passage, Chiswick, London W4.

# Summer flash promotion

GTE Sylvania have launched a summer flash promotion intended to encourage better photographic results by the use of outdoor flash. The promotion, aimed at chemists and photographic dealers, relies on Sylvania's belief that by using more flash a photographer would obtain better results and therefore be encouraged to take more pictures.

The trade incentive comprises a matching set of suitcases into which flash products are packed. Stockists are asked to exhibit Sylvania flash products using point-of-sale material with the message 'Summer sun when and where you want it". A photograph of the display should be sent to Sylvania and the best two retail entries submitted by November I should win a winter break for two in Palma or Madrid Every entrant should receive a free matching flight bag to compete the suite of luggage. Sylvania also suggest that stockists use the luggage as prizes for individual consumer competitions. Leaflets are available from the company. GTE Sylvania Ltd, 29 Saltaire Road, Shipley, West Yorks BD18 3HH.

Cutex glazes

Four new nail glazes from Cutex coat the nails with a light transparent colour. Described as "temptingly translucent" the shades available are amethyst, ruby, garnet and amber glaze (£0.85). These products will be included in the Cutex advertising campaign this month. The campaign itself, covering major women's magazines, will run until November. Chesebrough-Pond's Ltd, Victoria Road, London NW10 6NA.

# Loreste perfumes one and two

Parfum Loreste is claimed to be a "totally new concept" in the world of fragrance. There are two different but complementary perfumes which are said to be "capable of carrying a woman right through the day". Loreste 1 is a daytime fragrance but when Loreste 2 is added it becomes a more intimate and romantic fragrance (from £3.75 to £6.30). Loreste for men is also available as a lotion (£4.50) or deodorant spray (£1.55). Douglas Parfums Ltd, 5 Wellesley Avenue, Iver, Bucks SLO 9AU.

Second child leaflet published

The fourth leaflet "And baby makes four", has now been published by the Disposable Nappy Information Service. This leaflet is aimed at the mother expecting her second child and the problems she may face. Copies of this leaflet (and the other three—Tinies on the move; Baby on the way and Nappies the caring way) are available from the Disposable Nappy Information Service. Marketing Services Division, Robinsons of Chesterfield, Derhyshire.

Annual holiday

Nelldorn Ltd, 11 Onslow Road, Richmond, Surrey, will close their offices for the annual holiday between July 31 and August 11 inclusive. Dispatches due during those two weeks will still be effected.

Pictured below are the most recent additions to the Tabu bath range from Dana. These two new packs in the cream and bitter brown colours of the range are said to be versatile and easy to squeeze, and contain 125 gms of Tabu de luxe foam bath (£1.25) and 90 gms of Tabu hand and baby lotion (£1.10)



# Tommee Tippee



# Not just a pretty face.

Tommee Tippee's biggest ever advertising campaign breaks in September. Over 4 million mothers will see double

page advertisements in:—

Family Circle circ: 802,000

circ: 574,000 Living Parents circ: 155,000

Mother circ: 73,000

Mother & Baby circ: 32,000.

RANGE: They'll learn that there are a host of Tommee

Tippee products to choose from.

SAFETY: They'll learn that

Tommee Tippee's products don't just meet, but beat

the world's toughest safety regulations.

QUALITY: And they'll learn that Tommee Tippee products are designed and tested by leading baby-care experts.

To make sure they see Tommee Tippee products in your store, we've designed a range of versatile and adaptable display stands that get noticed, without getting in the way.

And, of course, the Jackel & Company national salesforce, and telesales service, will ensure you avoid any stock problems.



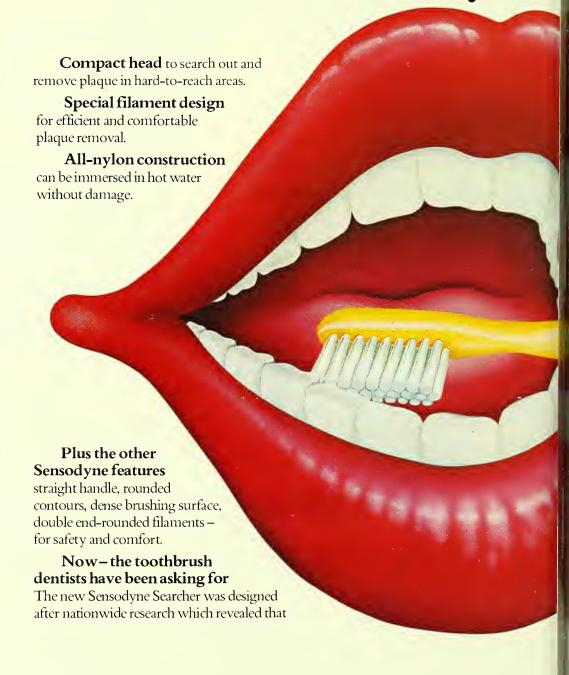
# TOMMEETIPPEE More than just a pretty face.

#### ackel 々

Tommee Tippee, Jackel & Company, Kitty Brewster Estate, Blyth, Northumberland NE24 4RG.

For sales service telephone Blyth 66771

# Clean-up at the new Sensodyne



# smile with earcher toothbrush

8% of dentists prefer a compact-head oothbrush with 3 rows of brushing filaments.

This design was almost twice as popular

#### Fastest growing toothbrush range

Professionally-recommended toothbrushes nave most growth potential in the toothbrush narket for the retail chemist because he is uniquely placed to endorse the dentist's ecommendation. And Sensodyne coothbrushes are the fastest-growing professional toothbrushes - sales are growing atnear 100% per annum.

#### Big introductory offer for you

There's a special launch bonus offer to the retail trade: we invoice you for only 10 of every dozen Sensodyne Searcher toothbrushes you order. On these terms you get over  $16\frac{1}{2}$  p. profit on each Searcher brush – a margin of 41.7% when you sell at the R.S.P. of 43p. Order now through your Stafford-Miller representative or usual wholesaler.

#### Bright new toothbrush display stand

We have developed a new display unit to hold supplies of all four Sensodyne toothbrushes – the new Searcher, plus Plaque Remover, Junior and Gentle.

#### Heavyweight professional promotion

The Sensodyne Searcher is being launched in June with a high-impact advertising campaign to dentists. The Stafford-Miller professional dental representatives will be calling on dentists nationwide; they will be supported by direct mail and press advertising to make this the most heavily promoted professional brand.

Our retail representative will be calling to offer you one - or you can contact us direct.



Stafford-Miller Ltd., Hatfield, Herts.

#### **EQUIPMENT**

# New Kirby Lester tablet counter

Kirby Lester Electronics have introduced a new tablet counter, the KL8, a totally redesigned version of their KL7. The KL8 (£430 plus VAT) is more compact and easier to clean.

KL8 incorporates an arrangement of 16 photocells around a central light source. Tablets are automatically separated as they fall through the sensing gates, and each tablet is counted as it breaks a light beam, ensuring high accuracy and reliability.

All the electronic circuits are contained on one "plug in" module, which makes servicing simple as it can be done by the operator. The counter is designed in an easy-to-dismantle style which gives access to all parts and makes cleaning more simple. Kirhy Lester Electronics, Waddington Street, Osbourne Industrial Estate, Oldham, Lancs.



#### Wash and dry hands

A handwashing and drying unit has been introduced by C. A. Wallgate & Co Ltd, for shops and offices where it is more suitable to retain a conventional wash basin. The Valet measures 540 x 460 x 220 mm and three operating buttons dispense soap, warm water and hot air. There is a vanity mirror on the front. C. A. Wallgate & Co Ltd, Crow Lane, Wilton, Salisbury, Wilts.

#### Pallet lifter

The semi-automatic Optilift Depalletiser, launched by Rockware Kingspeed Ltd, is said to lift almost any number, shape and arrangement of glass or other containers from a pallet without requiring change-parts for different containers.

It does this through the use of a vacuum head with side-skirts, similar to those on a Hovercraft to grip the sides of the layer board so that the complete layer, pad included, is lifted from the

pallet and deposited on a vacuum table, which retains the pad while the contents are swept off on to a full-width transfer conveyor.

The Optilift is designed to take standard 1,200mm x 1,000mm pallets loaded to a maximum height of 2 metres and to lift up to 150kg (3 cwt) per cycle. Pallets are positioned either by forklift truck or roller conveyor. The machine has a speed capability in excess of one pallet layer per minute. Adjustment of the lifting head to suit the varying heights of containers takes about half a minute.

Also from Rockware Kingspeed Ltd, is a powered roller conveyor system called Optiroll. The system, by avoiding line pressure, is suitable for fragile items that might otherwise be easily crushed. It incorporates low-torque rollers which are individually powered by a polyurethane belt driven from a layshaft running the length of the conveyor. Rockware Kingspeed Ltd, Courtney Street, Hull, North Humberside HU8 7QD.

# DIY packing for smaller firms

Bell Products Ltd, have recently introduced a low cost display packaging system called Bellpak. The "easy to assemble" system consists of crystal clear or blue-tinted pre-cut polyester sheets (minimum order about 2,000) together with white or coloured end caps. A pedal-operated stapling machine forms the sheets into firm display tubes. Tubes can be made to sizes from 3in to 30in long with diameters from 2in to 6in. Squares, ovals, circles, triangles and heart shapes are also possible. Bell Products Ltd, Oxlane, Harpenden, Herts.

#### Simple cash register

A single total, easy to use, electronic cash register, Vatman Checkout 11 (£239+VAT), is available from Decimo Ltd. Specifications include green indication, 58mm wide audit role, customer counter, date set and tax key. The register does not issue a receipt but may be fitted with a "no carbon" two ply role, if a receipt is essential. Decimo Ltd, Park House, 4 Chobham Street, Luton, Bedfordshire.

#### Adhesive signs

A revised reference list of British and European industrial safety signs is available from Focal Displays Ltd. The company also supplies self adhesive signs and vehicle livery panels. Focal Displays Ltd, 33 Elm Road, New Malden, Surrey KT3 3HB.

#### Protective foam

Protectofoam is a polyethylene mesh for use in bottle packaging. It is available in three mesh sizes and five colours as sheets, sleeves or pieces. Its elasticity allows moulding around irregular shapes. A. Latter & Co Ltd, 43 South End, Croydon CR9 1AN.

#### Warning posters

A set of three  $16\frac{1}{2}$  x 12 in posters (£1 for 3), dealing with warnings to shop-lifters, are claimed to possibly save their own cost during the first hour of use. The poster messages are: Shoplifters get court; Shoplifters make their mark in life (picture of fingerprints); A life-long criminal record could start with a shop-lifting conviction. G. Davis-Smith, 28 Parkdale, Wolverhampton WV1 4TE.

#### Hand held dispenser

Limpet Tapes Ltd have added a new hand held unit to their self-adhesive tape dispensers. The H5 (£3.95) accepts tapes up to 50 mm wide normally in rolls of 66 and 132m lengths. Limpet Tapes Ltd, 8 Hatcham Park Road, London SE14 5QD.

#### Clear PVC bottles

Rockware Plastics Ltd have introduced another range of three PVC bottles. Made in clear grade PVC, the bottles are available in 125ml, 250ml and 300ml sizes. The design incorporates a non-slip shoulder and the necks can take standard R4 closures. Rockware Plastics Ltd, Lower Ham Road, Kingston upon Thames, Surrey KT2 5AE.

#### Disintegration tester

A new table disintegration tester type EP6 has been introduced by Copley for use in pharmaceutical quality and production control of normal, enteric coated and delayed dosage tablets in accordance with the specifications of the European Pharmacopoeia, the USP and the BP (1978 Addendum). The unit is capable of testing six different tablet samples at any one time.

It comprises a central base which supports the motor drive unit, the six basket rack assemblies and the six beakers for the test medium complete with a heavy duty removable Perspex tank which is equipped with a thermostat. The thermostat it fitted with a secondary dial which enables fixed temperatures of either 25, 30 or 37°C to be pre-set if required and is fitted with a boil-dry safety cut-out and check thermometer as standard. A neon indicates the sequence of operation. Dimensions are 600mm high x 650mm wide x 520mm deep and the unit is designed to operate on single phase supply. Copley Technical Developments, Private Road No 7, Colwick Industrial Estate, Nottingham NG4 2ER.

#### Transit packs

Carton Industries (1944) Ltd, offer a service to laboratories supplying purpose-made packs for the transit of samples, etc. The company says it can economically produce quantities from a few dozen to thousands and small order requirements can be often met within 96 hours. Carton Industries (1944) Ltd, Bulford Road, Durrington, Salisbury.

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### Profit on turnover—a broad view

by Eric A. Jensen BCom, MPS, MInstM, FIPharm M

Profit is the return or reward for successfully bearing risk. In our type of economy no profit means no accumulation of capital for investment and no increase in productivity.

To define profit is easy: to suggest what is a "fair" profit is perhaps impossible. However, many of us in pharmacy feel that although we cannot state precisely what is "fair" we are less fairly treated than others. Here we come to the nub of the matter, to the fact that profits, like prices, like wages, have mean-

ing only when comparisons are made. In this article I suggest that we look at profit figures for a wide variety of business activity and make comparisons. We can readily make comparisons within pharmacy, but now let us peep outside. For my present purpose I have compiled figures for pre-tax profits of various companies and have calculated them as a percentage of turnover. Why as a percentage of turnover and not of capital invested?

To work out the return on capital invested in any business you need to know the present value of the business if it were on the market. This value would embrace stock, fixtures, lease and goodwill—the total obtainable. This is the sum that would be available for alternative investment if the money were not tied up in the concern.

If you want to know what return on investment your pharmacy is showing it is misleading if you just consider what you paid for it some years ago or if you regard the issued share capital as the relevant figure. You will also mislead yourself unless you are careful to calculate the return after allowing yourself the "going rate for the job", for the time you yourself work in the business. From what I have said you will understand why I have used a profit—turnover base. It would be extremely difficult to place a value as a going concern on any of the businesses I shall refer to (see table).

Here then are the figures. They are for 1977 apart from two cases which are for years ended in January 1978, and one case which is for the year ended October 31, 1977. Some are preliminary, provisional, unaudited.

The businesses listed are far removed in size, and most of them in other ways also, from an average general practice pharmacy with a turnover of, say, £80,000—half of it in NHS dispensing. Here are some questions we could profitably ask. Your own individual answers could play a part in your future policies. 1. What is the relationship between turnover and profit in my pharmacy? Profit to be net pre-tax and after my due "salary" as owner manager.

2. What results if I split the pharmacy between OTC and NHS and work out percentages for each part?

3. Having seen how my percentages compare with those in the table, how do I consider my risk-bearing compares?

When answering question three, you could, I suggest, fairly give weight to the following risk factors, factors which are in some way peculiar to pharmacy or of particular impact on pharmacy, and are additional to the risks inherent in any activity for gain in our form of economy. 1. The "market" for around 50 per cent of the product of many pharmacies is monopsonistic, that is there is only one "buyer", the State. This is the NHS situation. Furthermore, the "buyer" not open to arbitration on profit and has made an arbitrary decision on this!

It is worth comment here that the 16 per cent return on capital dictated by the State as regards NHS is low by current risk standards and goodwill is not taken into account in assessing the capital invested.

2. The constraints on advertising, whether or not we consider these desirable, affect the pharmacist in a way unique in business.

3. Health centres have introduced an added risk factor to pharmacy.

4. The necessity for pharmaceutical supervision in general practice dictates the need for turnover sufficient to meet

Conclusion

article.

The figures quoted in respect of busi-"outside" view, suggest that a retail about any other personal satisfaction your work may offer.

this "fixed" overhead, and increases vul-

5. The market for the average general practice pharmacy is localised, compared

with the national or international fields open to the companies examined in this

nerability to competition.

#### nesses, deliberately chosen to present an pharmacy should be showing a return of certainly more than eight per cent on turnover to an owner manager after allowing for his or her own salary. How does your pharmacy rate on this basis? I am talking about money, not

#### Books received

WHO Expert Committee on **Biological Standardisation** 

World Health Organisation (HM Stationery Office). 8 × 5½ in. Pp133. \$4.40.

This is the 28th report and No. 610 of the WHO technical report series. French, Russian and Spanish editions are in preparation.

WHO Expert Committee on Specifications for Pharmaceutical Preparations: 26th report.

World Health Organisation technical report series 614 (HM Stationery Office).  $8 \times 5\frac{1}{2}$  in. Pp53. SFr.7.

The SI for the health professions World Health Organisation (HM Stationery Office). 7×5 in. Pp75. SFr.5.

Analysis of Drugs and Metabolites by Gas Chromatography—Mass Spectrometry Volume 1, respiratory gases, volatile anaesthetics, ethyl alcohol, and related toxicological materials.

B. J. and M. J. Gudzinowicz, Marcel Dekker Inc, 270 Madison Avenue, New York, NY 10016,  $9\frac{1}{4} \times 6\frac{1}{4}$  in. Pp223. SFr 144.

Analysis of Drugs and Metabolites by Gas Chromatography—Mass Spectrometry volume 2: Hynotics, anticonvulsants and sedatives

B. J. and M. J. Gudzinowicz. Marcel Dekker Inc, 270 Madison Avenue, New York NY10016. 9×6 in. Pp512. SFr 144.

Health Care and Health Knowledge R. Dingwall, C. Heath, M. Reid, M. Stacey. Croom Helm Ltd, 2 St John's Road, London SW11. 9× 5½ in. Pp209. £6.95.

Interfacial Synthesis volume 2: Polymer applications and technology.

Editors F. Millich and C. E. Carraher, Jr. *Marcel Dekker Inc*, 270 Madison Avenue, New York NY 10016. 9×6 in. Pp560. SFr 190.

	Sales (£, rounded off in some cases)	Pre-tax profit (£, approx)	Profit/sales % *(approx)
Cadbury Schweppes	884m	48m	5½
Pearson Longman	146m	21½m	141
J. Bibby and Sons	168m	6.17m	31/2
Rowntree Mackintosh	469m	41½m	9
Empire Stores (Bradford)	93 <del>1</del> m	7m	7 <del>1</del>
Beatson Clark	17 <u>≩</u> m	2.36m	13
Gallaher	1407m	43 <del>1</del> m	3
Reckitt and Colman	577m	58m	10½
BAT	6212m	416m	61/2
United Biscuits	630m	38m	6 <del>1</del> 6
Woolworth	724m	47m	6 <del>1</del>
Rentokil	51m	8½m	16½
Unilever	9147m	550m	6
Trust House Forte	531m	38m	7

# Bioavailability—how important is it in practice?

by John M. Padfield, BPharm, PhD, MPS, CChem, MRIC, pharmaceutical formulation department, May & Baker Ltd.

"If we accept that clinical efficacy is the sine qua non of any modern medicine....then we should ask ourselves why other criteria for assessment of the effectiveness of medicines are necessary. Is the parameter bioavailability merely a substitute term for clinical efficacy, or does it have some special, different and perhaps complementary significance?" J. B. Stenlake (1974).

Professor Stenlake, in common with many other authors, has tried to indicate the relative importance of clinical efficacy and bioavailability, terms that have been heard with increasing frequency over the past few years. However, despite this exposure to the terms, the meaning of bioavailability is still not fully understood. To many people the issue is limited to a comparison of the proprietary name versus the generic name. However, this "generic equivalence" is a separate issue as inequivalence of bioavailability for any product, be it the generic or proprietary form of one drug, different proprietary forms of the same drug or the same proprietary form manufactured on separate occasions may have clinical sig-

Another view of bioavailability is that it can be equated with drug quality. While quality is certainly important, it is only part of a much larger question of comparable performance in vivo.

Many misunderstandings have arisen due to imprecise use of the terms "bioavailablity", "clinical effectiveness" and, above all, "equivalence". Thus the practitioner must know precisely what the terms mean.

Biovailability encompasses the extent to which a drug contained in a dosage form enters the circulating fluids after administration and also the rate at which this absorption occurs. Why the presence in the circulation and not at the site of action? Only occasionally is the receptor site known and in most cases only a particular organ can be identified as the

therapeutic target. However, the United States Food and Drug Administration has recently redefined bioavailability in terms of absorption and "availability at the site of drug action" (Dickinson, 1973).

Nevertheless, since clinical effects are usually a result of the drug concentration in the blood supplying the sites of action, the presence of drug in the circulating fluids is usually taken as evidence of availability. Bioavailability is thus assessed by measurement of the amount of drug in an appropriate body fluid (such as blood, urine or saliva) rather than by assessing a clinical response.

Clinical responses vary widely between different individuals and are often difficult to quantify, being primarily subjective judgments. Variability in response arises firstly due to differences between individuals in their rates of absorption, distribution and elimination allowing different concentrations of the drug to reach the site concerned, and secondly due to differences in the response of the receptor to the particular drug concentration reaching it. Disease can contribute to this variation with consequent enhancement or impairment of effect.

Quantification of the clinical response is a much larger problem in the assessment of bioavailability and only rarely can meaningful quantification be made; for example, in measurement of the lowering of blood sugar levels by hypoglycaemics or in the excretion of electrolytes and production of urine by diuretics. Drugs such as antidepressants, analgesics and antibiotics cannot be

Possible but not

Chloramphenicol

Oxytetracycline Penicillin G potassium

Ferrous sulphate

Hydrochlorothiazide

Tetracycline

Griseofulvin

Nitrofurantoin

problems

Ampicillin

Nystatin

definite bioavailability

Penicillin V potassium

meaningfully quantified with regard to clinical response.

Equivalence between different products of different batches of the same product may be of one or more types:

- ☐ Compendium (pharmacopoeial, pharmaceutical) equivalence relates to contents: amount, strength, purity, safety, disintegration time and dissolution rate. ☐ Availability equivalence relates to blood, saliva or urine levels vs time profiles featuring: peak concentration, time to peak concentration and area under curve.
- ☐ Bio-equivalence relates to superimposable blood or saliva level profiles.
- ☐ Therapeutic equivalence relates to equal clinical response at site of action.

Non-adherence to this terminology has led to many cases of controversy in the literature due often to misunderstanding of the terms. Koch-Weser (1974) has indicated that, while bioequivalence between products usually guarantees therapeutic equivalence, bioinequivalence does not necessarily imply therapeutic inequivalence. Reports that indicate "clinically significant differences in bioavailability" prove bioinequivalence but erroneously indicate therapeutic inequivalence in the absence of the necessary clinical observations.

Bioequivalence has had its meaning broadened in the new FDA regulations (Dickinson, 1977) to include availability equivalents that differ in their rates but not their extent of absorption, after administration of identical molar doses, if such differences in rate are deliberate and "are reflected in the labelling, are not essential to the attainment of effective body drug concentrations on chronic use or considered medically insignificant for the particular drug product studied".

Thus products may be: Bioequivalent but not therapeutically equivalent due to differences in tissue response to the concentration of drug reaching it; availability equivalent but not bioequivalent due to differences in rate but not extent of absorption and vice versa; pharmacopoeial equivalent but not availability equivalent due to differences in rates of solution or rates of absorption.

Significance

Given the definitions, therefore, is there evidence that a problem exists? Certainly there was much scepticism about the problem some years ago but it is gen-

#### Table 1: Multi-source drugs whose solid oral dosage forms present:

Most serious

bioavailability

Dexamethasone

Erythromycins

Triamcinolone

Warfarin sodium

Prednisolone

Prednisone

Quinidine

Thyroid

Bishydroxycoumarin

Diphenylhydantoin

sodium (phenytoin)

problems

Digoxin

### Least likelihood of bioavailability differences

Butobarbitone sodium Chlorpheniramine maleate Chlorpromazine hydrochloride

Dextropropoxyphene hydrochloride

Diphenhydramine hydrochloride Isoniazid\*

Meprobamate\*
Paracetamol

Pentobarbitone sodium\*
Phenobarbitone

Quinalbarbitone sodium\*

Reserpine\*
Sulphisoxasole

Sulphisoxasole
\*Originally appeared as serious problem in PSGB guide to pharmacists on bioavailability, 1972.
(Modified from Academy of Pharmaceutical Sciences Memorandum, October, 1974)

erally accepted now that for certain drugs, bioavailability is a matter for careful consideration, although the subject is probably accepted more among the pharmaceutical than among the medical profession. As demonstrated by the "digoxin affair" in 1972, medical practitioners are more likely to ascribe poor clinical effect to inappropriate choice of drug or dose, patient non-compliance or drug interactions than to any other cause such as differences between product for any one drug.

The reasons for this stance probably relate to inadequate education on the subject (true of pharmacy education until recent years) and a belief that patient variability is far more significant than product variability. While this is undoubtedly true for many drugs (for example, ampicillin) variations in digoxin bioavailability from 10-85 per cent found among marketed products (Lindenbaum, 1973), are clinically significant. The number of cases of clinically significant differences in bioavailability is unknown since reliable comparative studies are rare. However, in those comparative studies in the literature where formulaion differences exist between products, herapeutic inequivalence has been estabished in the following: Aspirin, bishydroxycoumarin, digoxin, erythromycin, ndomethacin, levodopa, nitrofurantoin, phenytoin, prednisone, tolbutamide.

In the absence of this clinical evaluation much emphasis has been placed on in vitro and in vivo testing to estimate and predict drugs where differences in formulation and manufacture may lead to problems in practice. The studies were combined in several ways in 1972 by the Pharmaceutical Society and in 1974 by the United States Academy of Phar-

maceutical Sciences to provide tables indicating which drugs pharmacists should be aware of as being, or not being, a potential bioavailability problem (tables 1 and 2). The lists will provide the most reliable guide to practitioners, the only amendments to these lists being additions to the "serious" list of the US Academy and the list of the Society, published recently by the FDA (Dickinson, 1977). Drugs now also considered by the FDA to present a serious problem are: chlorambucil, chlorbetamethasone, diazepoxide, cortisone acetate, fluprednisolone, methotrexate, methyltestoterone, nitrofurantoin, oestrogens, phenothiazine drugs, sulpha drugs, theophylline, thiazine drugs. Sulphisoxazole and chlorpromazine hydrochloride were originally considered by the US Academy to present little problem.

# Table 2: Other drugs where formulation may affect bio-availability

Acetohexamide Aminophylline Chlortetracycline Diethylstilboestrol Hydrocortisone Indomethacin Methandrosterolone Methylprednisolone Pentaerythritol tetranitrate Phenindione Phenylbutazone Sodium aminosalicylate Spironolactone Stilboestrol Sulphadiazole Sulphafurazole Sulphamethoxazole Theophylline, ephedrine and phenobarbitone tablets Tolbutamide (Modified from PSGB guide to pharmacists, 1972)

Thus the extent of the bioavailability problem appears to be limited at present to 20 or so drugs. It is not the purpose of this article to review all the factors responsible for these problems as this has been adequately done on several occasions. However, it is generally true that the problems have been seen to arise in those drugs which have a low therapeutic index, for example, digoxin, where changes in formulation may push a blood level above its toxic level, and also in those drugs that are not completely absorbed from the gastro-intestinal tract, (for example aspirin or diazepam). Thus we must be aware of the factors responsible (some of the pharmaceutical factors are tabulated in table 3) so that we can identify in new drugs possible sources of bioinequivalence.

One factor that must not be overlooked in any examination of the bioavailability of drug products is the influence of food. There have been many conflicting reports in recent years as to the importance of diet and the nature of that diet to drug absorption, but a recent review (Welling, 1977) has adequately summarised the present varied influence, from a significant increase (nitrofurantoin, griseofulvin) to a significant decrease (most penicillins, some tetracyclines, levodopa) in absorption after taking food. As Welling points out, the clinical significance of such interactions has to be considered separately in each case because, in many cases, for example, some antibacterial agents which normally circulate at concentrations well above MIC values, the effects are unimportant. However, in other cases (for example, some tetracyclines, levodopa, some penicillins) therapeutic failure could result from lowered blood levels.

#### Choice

The opportunity now exists for pharmacists to assist in therapy by making a rational choice between competitive products. It is no longer acceptable just to dispense the cheapest product, as demonstrated in 1968 and 1969 when over 27 million chloramphenicol capsules and 40 million oxytetracycline capsules respectively were withdrawn from the US market due to inadequate therapeutic response (Cawthorne & Eckel, 1973). So what approach should the pharmacist adopt when confronted with the selection of two "equivalent" drug products? In the past the reputation of the company, its involvement in R&D and the physical characteristics of the finished dosage form have influenced his choice. Now, however, he is confronted with scientific data with which

to aid his choice—or lead him astray. Cost. Probably the cost will be considered and, while the "cheapest" cannot be assumed the "best", neither can the most expensive. Recently Slywka et al (1977) have demonstrated that cost is not a good indicator of bioavailability, since in only one case in four examined in the US (nitrofurantoin 50mg) was

#### Structure (acid or base, salt, ester) Physicochemical Solubility (water, "lipid") Partition coefficient L pKa Particle size Drug Surface area LPhysical Physical Solid state (Crystal [polymorphism, 'solvated] or amorphous) Dissolution rate Disintegration time Dosage form: Absorption from solution > suspension > powder > capsule > tablet > coated tablet Additives: Disintegrant, binder, diluent, lubricant, wetting agent, Drug product suspending agent, colouring, preservative Manufacture: Granulation, compression, coating, etc.

Table 3: Pharmaceutical factors affecting drug availability

# Bioavailability— is it important in practice?

Continued from p149

there found to be a relationship between these two variables, where the higher cost products gave the highest bioavailability (in this case the highest cumulative excretion of drug in the urine).

Manufacturer's information. Most of the information a UK pharmacist has on products is provided by the pharmaceutical industry. By its very nature the information will be promotional in favour of that company's product and it is for the pharmacist to evaluate that information, if he is able, in order to satisfy himself of its validity in the comparison he wishes to make.

Aesthetic considerations. A choice will always be made on an experienced pharmacist's perception of the outward "quality" of the product. This is a factor of which all companies must be aware

Physical tests. Where information is supplied on the disintegration and dissolution of dosage forms without comparison with biological studies, caution should be observed. There have been no comprehensive correlations between disintegration times and bioavailability and those correlations with dissolution can be misleading if not carefully examined. Did the correlation exist only between an amount in solution at one time and a plasma level at one time, or were correlations seen at different times? Why was the time chosen and what does it mean? Are the conditions of the physical study meaningful and can they be compared with those used for other products? While correlations have been demonstrated between dissolution rate and blood levels for digoxin products using the USP dissolution apparatus, no correlations were able to be obtained for nitrofurantoin products using the same apparatus (Cabana, 1976).

Biological and clinical studies. Scientific information of this type is appearing increasingly in advertising literature relating to bioavailability and bioequivalence. It should be examined carefully since there are many pitfalls that can be encountered in comparing such complex studies (Schumacher, 1975). The most important parameters are:

☐ Experimental and clinical protocol: When was drug administered? Healthy volunteers or diseased patients? Route of administration? What dosage form? What was formulation in dosage form? ☐ Data obtained: Inter-subject variation? Intra-subject variation? Peak blood concentration? Peak blood time? Area under blood level curve?

Guidance. Apart from some of the lists mentioned the UK pharmacist has very little independent information with which to form a judgment. In the USA a bioavailability project was set up in

1971 to provide pharmacists with summary information in a standardised format with appropriate comments in order to assist them in evaluating competitive products. The monographs (published in J Am Pharm Assoc) give the background to problem, characteristics of drug (general and physical, bioavailability analytical method, literature survey, regulatory and compendial activity), clinical significance, criteria for bioavailability tests, and information available from manufacturers. Twentyfive drugs were covered by the project, which has now ended but the monographs have formed an invaluable guide to practitioners in the USA. It would be of great value if such a project were instituted in the UK.

The following drugs have been covered: 1975—Digoxin, nitrofurantoin, oxytetracycline, prednisone, ampicillin, phenytoin (diphenylhydantoin), tetracycline; 1976—Hydrochlorothiazide, propoxyphene, prednisolone, erythromycin, warfarin, phenylbutazone, quinidine sulphate, digitoxin, sulphisoxazole; 1977—Aspirin, meprobamate, penicillin V potassium, papaverine hydrochloride (sustained release), ferrous sulphate, paracetamol (acetaminophen), thyroid hormone preparations, digoxin (updated), conjugated oestrogens.

#### Conclusions

"Bioavailability is a subject on which neutrality is scarce and inflamed debate often becomes the rule rather than the exception".

The writer of that editorial in the December 1977 issue of J Am Pharm Assoc, in summing up the APhA bioavailability project, indicated that it was very difficult to pinpoint the beginning of the bioavailability issue but it was now firmly placed as a vital parameter in therapy. If pharmacists are to make one valuable contribution to rational therapy in the next few years in the UK it will be in providing their clinical colleagues with advice on which products to use. To do that they have to become competent in assessing the merits of competitive products from the available information and pressing for that which is not readily available. There is some doubt that the majority of pharmacists could make a rational selection, other than on grounds of cost (Swarbrick, 1977) or that they even want to. This article has gone some way in indicating what the problem is and its scope. It is now up to the practitioner to take it further.

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#### **LETTERS**

# Pharmacy planning in New Zealand

I have just seen the item on Australia and New Zealand in C&D June 17 issue and I can only assume that, so far as New Zealand is concerned, the NPA Board members who visited the country in April must have misunderstood the situation relating to ownership of pharmacies.

The Town and Country Planning Act has just about the same amount of relevance to pharmacy distribution in New Zealand as the equivalent legislation has in Great Britain. It is only when it is proposed to open a pharmacy in an area which is zoned for residential or office use that the prospective proprietor has to apply for a "departure" from the normal zoning to permit a pharmacy to be established. The Town and Country Planning Act certainly has no relevance to the overall question of the distribution of pharmacies in New Zealand.

#### Control of ownership

Pharmacy ownership is controlled under the Pharmacy Act 1970 which permits a pharmacy to be owned by a pharmacist, a partnership all the members of which are pharmacists or a limited company provided 75 per cent of the shares are owned by a pharmacist or pharmacists and effective control of the company is vested in that pharmacist or those pharmacists. There is an added restriction that, other than with the consent of the Pharmacy Authority, a pharmacist, or any other person, may have an interest in only one pharmacy. Pharmacies which were in existence under different forms of ownership prior to October 1954 are given a protection under the "status quo" provision until there is a transfer of shares amounting to 25 per cent of the share capital of the company when the normal provisions of the new legislation apply.

The Pharmacy Authority is a senior barrister appointed by the Minister of Health and his responsibilities are clearly defined in the Pharmacy Act. The appropriate section includes the words "the Pharmacy Authority shall ensure ... as far as is consistent with the provision to the public of a full, efficient and economic service in respect of the supply of drugs and pharmaceutical goods, that pharmacies are carried on by independent pharmacists owning and conducting their own business." All the available evidence points to the fact that the Authority has conscientiously discharged his responsibility over the past 20 years. Thus it is the Pharmacy Act and not the Town and Country Planning Act which controls the ownership of pharmacies in New Zealand.

The "one man one pharmacy" quotation in the June 17 article may also be a little misleading. Although one pharmacist may only have an interest in one

pharmacy (other than with the consent of the Pharmacy Authority) there is, of course, nothing to prevent two or more pharmacists having an interest in a single pharmacy and the number of such cases is increasing.

One can understand the doubts of the UK visitors that a population of three million could support about 1,150 pharmacies. The number of pharmacies has been relatively stable over the last decade, a period during which the population of New Zealand has been increasing. The growth in population has now ceased because of the immigration policies of the Government and if that policy continues and if there is a substantial increase in the number of health centres in New Zealand then the number of pharmacies may be reduced. One has to bear in mind, however, that the New Zealand population of 3 million is spread throughout a country which has about the same land area as Britain. There are many small towns (or large villages) which seem to be able to support a pharmacy although the catchment population is perhaps only 2,000 or so. Prices for goods sold in pharmacies, and margins, would appear to be somewhat higher than the corresponding UK equivalents and the average income of the proprietor pharmacist, although it is never enough, is sufficient to suggest that there s not likely to be a mass closure of pharmacies over the next few years!

Finally, may I say that although our colleagues across the Tasman are quite capable of speaking for themselves, I doubt very much if the "prescription charge" in Australia is £3 per item. Until recently the charge was \$2 and it has recently been increased to \$2.50.

John Ferguson

Secretary & registrar

Pharmaceutical Society of New Zealand

Mr Ferguson was an assistant secretary to the Pharmaceutical Society of Great Britain before moving to New Zealand
—Editor

#### RPM – a reply to Unichem's letter

Your report (July 8, p54) of Mr P. Dodd's letter to Unichem customers led me to write the enclosed letter to him. R. Jackson

London WC1

The letter reads:

was pleased to receive your letter today concerning discounting by wholesalers because it gives me the excuse for writing about my concern at the Unichem position.

As chairman of the West Metropolitan Branch of the Pharmaceutical Society and National Pharmaceutical Association, I have been aware for some time about the growing problem which is just now coming out "into the open". All colleagues to whom I have spoken are agreed that it is, in fact, Unichem who have precipitated the crisis. Ever since the company decided that the discount on OTCs should be linked to the value of "ethical" purchases, it has been only a matter of time before other wholesalers would see that a successful policy should be countered by the only means available to them. The real mischief has been the introduction of the graded discounts linked to "ethical" purchases because it is only human nature to try for a larger discount once a certain lower level is reached. Of course, I acknowledge that the practice of the phone clerks selling certain lines each day is a good and legitimate way of increasing sales, and is to be encouraged, but you really cannot complain when other wholesalers use the only means open to them to counter a loss of business, which is due to an unfair (though clever) way of circumventing RPM at the wholesaling level.

I therefore feel that your letter is only an acknowledgement on your part that you will need to escalate the battle which you started in order to retain the advantage, which should have been stopped by the manufacturers long ago.

# Where are all those potential leaders?

I was somewhat interested in the letter from Mr Evens last week and would be obliged to him if he would give some indication as to the whereabouts of the hundreds of keen and able pharmacists whom he claims would be able to fill the key positions in pharmacy if only the meetings were held on Sundays. I would suggest to him that leaders do not emerge spontaneously and that to fill most positions requires some type of apprenticeship. In the case of membership of PSNC this would appear to be a number of years as a member of a local Pharmaceutical Committee, meetings of which are usually held in evenings when most pharmacists are able to attend without needing locum assistance. All that is involved is the sacrifice of a little spare time in the interest of the profession. Despite this, in the case of the elections held earlier this year, elections for contractor representatives were held in less than one third of the committee areas. Whatever happened to these hundreds of able and keen pharmacists who are so anxious to serve?

If one considers the present private contractor membership of PSNC one finds that nine of the eleven members are single pharmacy owners, and of these I think that five do not have an assistant pharmacist. They are keen enough make the effort and suffer the expense which membership demands and one can only conclude that the hundreds mentioned by Mr Evens are just not quite as keen as he imagines them to be.

Personally, I was delighted to read Griff David's letter. It was a letter which needed to be written and I agree with every word. Certainly we require a leader, but the leader must have and have earned the complete confidence of

all his colleagues and this can never be achieved by riding roughshod over them.

Finally, regarding Sunday meetings, I note that Mr Evens comes from Kent and no doubt Sunday transport is quite convenient for him. In my own case, to travel to London and back on Sundays would require that the meeting should start no earlier than 3 pm and finish no later than 5 pm. The alternatives would be either two night rail sleepers, or travelling down on Saturday afternoon and back on Monday morning. The same problem would face many of Mr Evens' "hundreds" unless they happen to reside close to London.

A. Medcalfe Lancaster

Unpraiseworthy

I read with dismay your editorial suggestion that the Pharmaceutical Services Negotiating Committee and its chief executive should be congratulated for securing an increase of 13.3 per cent in contractors' remuneration from £129.4m in 1977 to £146.6m in 1978 ("An executive's lot", last week). This tendentious and misleading suggestion is peculiarly reminiscent of the propaganda issued to MPs by the Department of Health in the recent debate in the House of Commons, and also of the attempts at self-justification by the PSNC. The simple fact is that the overall monetary rise in the total professional fee and oncost element of the pharmaceutical service derives from the product of the increased numbers of prescriptions and the considerable increase in the net ingredient cost.

Apart from securing a reduction in the discount scales (which was really a recognition of past over-discounting and was not even retrospective—unlike the £11m cut), the PSNC has achieved little during the past few years that would entitle it to receive congratulations.

As an analogy, take an hourly-paid person working for ten hours a day and investing £1,000 in a building society—the fact that he would receive more pay and interest than would a similar person working for only eight hours a day and investing £800 would hardly be adduced as evidence of the success of any union to which he may belong.

The success of PSNC should only be measured by the money it has persuaded the Department of Health to add to the global figure in the balance sheet, and the professional fee and on-cost percentage produced therefrom. In fact the money in the balance sheet has been reduced and the fee and on-cost percentages have been static for years—and are likely to remain so for a long time as a result of the contract.

Excepting the controversial move of redistributing our own money, the PSNC has remarkably little to show for its efforts. Hardly a case for editorial congratulations of either the committee or its executives.

E. D. Hurt Southam, Warwicks

# Pharmacist 'mends his ways' in a year

A pharmacist accused of professional misconduct had "mended his ways", the Pharmaceutical Society Statutory Committee said in London last week. Mr Kevin Moore, who had his case adjourned by the Committee in 1977, was told by the chairman, Sir Gordon Willmer, "You were very near to being struck off the Register last year. I am delighted to learn you have used the year to demonstrate that you have been able to mend your ways." The Committee issued a reprimand to Mr Moore.

Mr Moore, formerly of North Street, Wilton, Salisbury, had appeared before the Committee following complaints by two pharmacists who employed him during 1975 and 1976. One complaint by Mr Richard Badham, a director of Badham Chemists Ltd, of Waddon Road, Cheltenham, was that after working as a locum pharmacist Mr Moore left behind a cheque which "bounced."

Mr Gordon Hill, secretary of Dorcan Health Centre (PD) Ltd, of Ferndale Road, Swindon, said Mr Moore ordered about £170 worth of photographic and electrical goods for himself but had not paid and also made excessive use of the telephone for personal calls.

Mr Moore, who now lives in Croydon, showed the Committee a reference from his present employers stating that he joined the company last October and had proved himself totally reliable.

Mr Josselyn Hill, the Society's solicitor, said an inspector had visited the pharmacy and was satisfied with Mr Moore's performance. Mr Moore had settled his debts to Mr Badham and the health centre.

#### 'Messy' Controlled Drugs records

An Isle of Wight pharmacist whose Controlled Drugs records had been found in "a mess" by the police, came before the Committee. Sir Gordon said that although he had apparently "turned over a new leaf", his case would be adjourned for 12 months so that he could show beyond any doubt that he was capable of running his three pharmacies properly.

Mr Michael John Wallace Haynes, 37. of Park View, Wootton, with shops in Wootton, Ryde and Newport, qualified in 1968. He was fined a total of £150 by the Isle of Wight magistrates last August for failing to keep Controlled Drugs in a locked cabinet and for not keeping an up to date register of Controlled Drugs.

Sir Gordon said the Committee took a serious view of Mr Haynes having no locked cabinets for Controlled Drugs nine months after the Regulations requiring such cabinets had come into force. The Committee also took a serious view of the "slipshod" way in which he kept his registers, because they were a vital piece of evidence in a burglary.

In his evidence Mr Haynes said he had had difficulty in obtaining the cabinets but they were eventually delivered in December, 1975. He told the Committee that the registers had been in use for a long time when he bought his shops. He had been warned by the police drugs inspector in a friendly manner about the registers, and he regretted that he did not act on this warning earlier. He was now keeping them in a proper manner and running the shops on an ethical basis. Mr Haynes agreed that if there was a burglary the police needed to know what Controlled Drugs were taken but he dispensed few dangerous drugs at the time so there was little to be taken.

#### Unsupervised sale of Medinite

Sheffield and Ecclesall Co-operative Chemist Ltd, of Ecclesall Road, Sheffield, and its superintendent pharmacist, Mr Harold Wilson, were reprimanded after the Committee heard the company was fined £5, with £5 costs, for selling Vick Medinite, without the supervision of a pharmacist. The company had pleaded guilty to the charge at the local magistrates court last December.

Mr Peter Greenwood, a Society inspector said he had bought a bottle of Medinite from a counter marked "Health foods and medicines" in a company store. He had recently returned to the store and he reported that the counter no longed carried Part 1 poisons. Everything was in order.

Mr Wilson said an assistant had gone into the stock room to re-stock the counter with simple medicines, "and had erroneously got certain Part 1 poisons." It was an isolated incident which would not be repeated. An observation window had since been placed in the pharmacy, and all Part 1 poisons were sold from shelves by the window. Assistants now had strict instructions to refer customers to the pharmacist in charge so that he could supervise the sale of any poisons.

#### End of a 'chapter of accidents'

A "chapter of accidents" ended with a company and three pharmacists being reprimanded by the Committee. They were Rashmi's Ltd, trading as Mansells of New Cross Road, New Cross; Mr Jadavji Patel, the former superintendent pharmacist of Stuart Avenue, Kingsbury; Mr Dinka Mehta, former pharmacist in

charge of the shop, of Dagmar Avenue, Wembley; and Mr Rashmikant Vora, a director of the company, also of New Cross Road.

Mr Patel and the company appeared before the Committee 12 months ago after pleading guilty to selling a bottle of cough mixture containing dextromethorphan hydrobromide without a qualified pharmacist being present. The company was fined £25 with £40 costs. The case had been adjourned for Mr Mehta and Mr Vora to give evidence.

Sir Gordon had said he was far from satisfied with the set-up. Mr and Mrs Vora, the directors of the company, had qualified as pharmacists in India but were unqualified in this country. After hearing further evidence, he said it was plain there was a muddle between Mr Patel, Mr Mehta and Mr Vora at the time of the offence in March, 1976. This resulted in the shop being without a pharmacist when a Society inspector made the purchase.

"It was a chapter of accidents. Mr Mehta was taken ill but he failed to inform Mr Vora he would not be in. Mr Vora opened the shop expecting Mr Mehta to turn up any time. He took no steps to inform Mr Patel he was without a pharmacist that evening.' Patel was the superintendent but at the same time he was running his own shop in Victoria. He told the Committee that if he had known Mr Mehta had not turned up he could have closed his shop and covered for him. Mr and Mrs Vora had both qualified since the last hearing and Mr Vora was now the superintendent. Mr Mehta left the business in summer 1976 and Mr Patel the following December.

#### Advertisement denied

A pharmacist was accused of advertising his professional services contrary to the guidelines of the Society's Statement on Matters of Professional Conduct. Mr Josselyn Hill for the Society, said a member of the Society had complained about an entry in the supplement to General Practitioner giving the name, address and extended hours of opening.

The Council of the Society complained that he had allegedly circularised to doctors' surgeries a printed postcard advising his hours of service as a "late

night chemist".

Mr Hill said the use of the word "chemist" in each case was a breach of the Society's Statement because it advertised professional services. The accused pharmacist emphatically denied he had placed the item in the supplement or

that he authorised anyone to put it in on his behalf.

Sir Gordon said there was no evidence that he had caused the advertisements to be inserted in the supplement "so this complaint falls for lack of proof." Although three of the printed cards were recovered from doctors' surgeries, there was no evidence to show any kind of organised distribution.

Under the Society's Statement objection might be taken to the words "Late night chemist" in large print and underlined. The pharmacist had undoubtedly been sailing close to the wind, but the Committee was not prepared to say that such conduct had merited disciplinary action. "We propose to take no action in this case."

#### Man pretends to be pharmacist

The employers of a man who pretended to be a pharmacist were reprimanded after pleading guilty at Marlborough Street Court in August, 1977 to selling a substance listed in the Poisons List without a pharmacist being present. A. Maitland & Co Ltd, Piccadilly, London, were fined £25 with £40 costs.

At the same time Mr Alan Jeffray, an employee, admitted unlawfully using the title of pharmacist. He was fined £50 with £50 costs. Mr George Norris, a Society inspector, said an anonymous letter had been received alleging that the shop was remaining open for certain periods without a pharmacist in control.

A colleague bought a bottle of kaolin and morphine mixture BPC. Mr Norris then questioned the assistant, Mr Jeffray, who said he was a registered pharmacist. But when asked to produce a certificate of registration, he admitted he was not a pharmacist, nor was there one on the premises.

Mr Jeffray told the inspectors he would not normally call himself a pharmacist, although he had done so on that occasion. He had been instructed not to dispense or sell Part 1 poisons. He had forgotten that the substance he had sold to the inspector was such a product.

Mr James Wadsworth, for the company, said they deeply regretted the offence. An inspector had visited the shop since and there were no more complaints about their operation.

#### Third failure to appear

An Oxford chemist failed for the third time to attend to answer an allegation of misconduct following his conviction for drug offences. Mr Josselyn Hill, for the Committee, said that Dahyabhai Bhagvanbhai Patel—who formerly had a pharmacy in Woodstock Road, Oxford -had been removed from the Register for non-payment of fees. Sir Gordon ordered that a letter should be sent to the registrar saying that Mr Patel's name would not be restored until he appeared before the Committee.

#### **Another unsupervised** Part 1 sale

A Sheffield company and its superintendent pharmacist were reprimanded for selling a substance containing a listed poison without the supervision of a pharmacist.

W. Jamieson (Chemists) Ltd of Orgreave Close, and Mr George Wish, the superintendent, appeared before the Committee following conviction of the company in December for selling Panadeine Co tablets without supervision. The company was then fined £5 with £5 costs.

Mr Greenwood, the inspector, said he visited the pharmacy at Birley Moor Road, Sheffield, and noticed a large variety of preparations containing Part 1 poisons on display on an open self-service shelf. He bought two packets of Panadeine Co tablets from an assistant.

Mr Joseph Dale, the chief pharmacy inspector, said the Society was concerned about the self-service of medicines with the development of supermarket methods of retail trading.

Mr Wish told the Committee he was also a director of the company and said that he accepted full responsibility for what had happened. The Part 1 poisons were now behind a glass screen in the dispensary. He said Mr Greenwood called at a busy time in the middle of a 'flu epidemic and bus strike and when an inexperienced pharmacist was in charge at the premises.



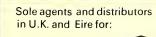
Prescribable for the dietary management of phenylketonuria, similar amino-acid abnormalities, renal failure, liver failure, liver cirrhosis, gluten-sensitive enteropathies including steatorrhoea due to glutensensitivity coeliac disease and dermatitis herpetiformis.



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#### **COMPANY NEWS**

#### Balance of Health & Diet bought

Mr and Mrs John Peet have now purchased the balance of 51 per cent interest in Health & Diet Food Co Ltd, previously held by Dr Ritter GmbH & Co, the German health food organisation. As a result Dr Raemisch, chief executive of Dr Ritter & Co, has resigned his chairmanship and Mr Peet becomes chairman and managing director. Mrs Peet joins the board as director with responsibility for exports, Mr Malcom Dean is director with responsibility as general manager for the Radcliffe factory and warehouse.

#### Swiss franc rise hits Sandoz

First half turnover for Sandoz AG was 7.8 per cent lower in 1978 than during the corresponding period in 1977. The drop from SwFr 2.44 billion to SwFr 2.25 bn was due entirely to the deterioration of foreign currency in relation to the Swiss franc, the company says. Without translation losses, turnover should have been up 13 per cent to a record level.

#### A & W merger

The proposed merger between Tenneco Inc and Albright and Wilson Ltd is not to be referred to the Monopolies and Mergers Commission under the provisions of the Fair Trading Act 1973, Mr Roy Hattersley, Secretary for Prices and Consumer Protection, has decided.

#### New links for Middle East trade

A new Anglo-Arab trading partnership has been established jointly by Guthrie Corporation of London, and A. R. E. Galadari and Brothers of Dubai. Guthrie Galadari (Pte) Ltd, based in the United Arab Emirates, with headquarters in Dubai, is establishing a modern European style distribution network to service retail outlets in the Middle East with pharmaceuticals, toiletries, cosmetics products for the home, and processed foods.

The Galadari family are said to have been international traders in the Gulf for more than 150 years and the Guthrie Corporation claims to be one of the largest international trading organisations with a 1977 turnover in excess of US \$500 million. In London, Guthrie Galadari (Pte) Ltd, will be represented by Guthrie Trading (UK) Ltd, Bath House, 53 Holborn Viaduct, London EC1A 2ES (Telephone 01-248 7671).

Briefly

Hallsons Ltd have moved from South Woodford, London, to larger custom designed premises in Harlow Essex. Their



The Farley Health new products marketing department team (left to right): Mrs Jill Salmon (secretary), Mr Doug Ball (bulk sales manager), Mr Peter Price, Mr Graham Astbury (marketing manager), Mr Dennis Clarke, Mr Anthony Bush (new products manager) and Miss Mary Pleasant (see Appointments).

new address is Perry Road, Harlow, Essex CM18 7PW, telephone (0279) 39391.

Baxter Travenol in Ireland are currently engaged in a multi-million pounds expansion at Castlebar, Swinford and Tuam.

F. Ellis Ltd formerly of 13 Carr Lane, Slaithwaite, Huddersfield, have recently moved into new premises at 9 Carr Lane (telephone: Huddersfield 842803).

W&T Avery have opened a new service branch at Overthorpe Road Industrial Estate, Thorpe Way, Banbury, Oxon. The Broad Street premises have been

#### **APPOINTMENTS**

Baxter Fell Northfleet Ltd: Mr Cecil Grice has been appointed field sales manager.

Paterson Products Ltd: Mr David Murray has been appointed export marketing director.

Remploy Ltd: Mr Trevor Owen has been appointed managing director with effect from September 7.

Sperry Remington Consumer Products: Mr Stephen Llewelyn has been appointed advertising executive.

Cow & Gate Babyfoods Ltd: Mr Jack Robinson has been appointed area sales manager for the north-east. He was formerly Cow & Gate's medical representative in South and West Yorkshire. Dalgety UK Ltd: Mr J. G. Smith has been appointed general marketing manager of ABM Chemicals Ltd. He has assumed responsibility for all company's marketing activities.

May & Baker Ltd: Mr Ian P. Arnold has been appointed external relations manager following the death of Mr W. Evans. Mr Arnold was deputy to Mr Evans for the past three years.

West Pharmarubber Ltd: Mr John Warrow has been appointed general manager. He was formerly assistant general manager and was responsible for

establishing the company at its St Austell base in 1968.

Farley Health Products Ltd: Mary Pleasant has been appointed market analyst and Dennis Clarke and Peter Price appointed assistant product managers. These appointments complete the staff of Farley's recently established new products marketing department.

Unichem Ltd: Mr Roger Metcalf has recently been appointed manager of the Newcastle branch, situated at the Howdon Green Industrial Estate, Wallsend. Mr Metcalf joined the company in 1972 as assistant manager at the Croydon branch; four years later he was promoted to branch manager.

Albright & Wilson Ltd: Mr F. H. C. Podger has been appointed general manager, finance. Mr A. G. Cropper is to undertake special economic studies at corporate head office and Mr W. Shillaker has been appointed administration and finance director of Bush Boake Allen at their worldwide headquarters in Walthamstow. Mr J. M. Kinsey is now managing director of Bush Boake Allen, Australia.

#### **COMING EVENTS**

National Pharmaceutical Association, Town Ha Chequers, St Albans, at 4 pm. Annual meeting. Albans, at 4 pm. Annual meeting.

Advance information

Symposium on Product Formulation, Society of Cosmetic Chemists ot Great Britain, October 9-10, Crown Hotel, Harrogate, North Yorks. Sessions include shampoo formulations, perm formulation, fragrance communication, colour legislation and cosmetic use of herbs and extracts. Applications (270 members, £90 non-members) to general secretary, Society of Cosmetic Chemists of Great Britain, 56 Kingsway WC2 by September 29.

First Symposium of the European Federation for Medical Intormatics, September 4-8, Cambridge University. Theme of symposium "Review of information systems and factors that have facilitated their successful operation." Further details from MIE78 Conference office, Online Conferences Ltd, Cleveland Road, Uxbridge, Middlesex. International Congress of the History of Pharmacy, June 13-19, 1979, at Basle/Lausanne, Switzerland. Provisional application by November 1. Further details from Dr G. Schramm, organising committee of the International Congress of the History of Pharmacy, Tiechestrasse 99, Stadtspital Waid/Zurich, CH8037 Zurich, Switzerland.

22 July 1978

#### **MARKET NEWS**

#### Holiday influences

London, July 19: The summer holidays are now affecting the markets as in past years. Buyers are mostly restricting their purchases to cover only their urgent needs; consequently there was a "mixed bag" of price changes during the week with some oils and crude drugs reduced and a slightly smaller number dearer.

In botanicals Cape aloes, some balsams, cascara, cinnamon bark, ipecacuanha and senega were among those marked down while benzoin, dandelion, henbane and styrax were dearer. Chinese menthol was sharply lower for shipment. Among essential oils peppermint and spearmint were lower.

#### Pharmaceutical chemicals

Acetarsol: £12.12 kg in 50-kg lots.

Acetic acid: 4-ton lots, per metric ton delivered—
glacial BPC £274, 99.5 per cent £261.50; 80 per cent grade, pure £240.50; technical £224.50.

Acetone: £262 to £266 metric ton as to grade for 30-drum lots.

Adrenaline: (per g) 1-kg lots base £0.25; acid tartrate £0.20.

Aluminium chloride: Pure 50-kg lots £1.0206 kg.

Ammonium acetate: BPC 1949 crystals £0.7378 kg in 50-kg lots; strong solution BPC 1953 £0.243 kg in 200-kg lots. Ammonium bicarbonate: BPC £178.35 metric ton,

ex-works, in 50-kg bags.

Ammonium chloride: Pure in 50-kg lots £0.2344 kg

Amylobarbitone: Less than 100-kg lots £12.33 kg;

sodium £13.47. Aspirin: 10-ton lots £1.40 kg; 1-ton £1.48. Atropine: (Per kg in 3-kg lots) Alkaloid £133.70; methonitrate £102, methylbromide £124.40, sulphate

methonitrate £102, methylbromide £124.40, sulphate £94.50.

Benzocaine: BP in 50-kg lots, £6.08 kg.
Benzoic acid: BP in 500-kg lots, £0.7426 kg.
Carbon tetrachloride: BP 5-ton lots in 290-kg drums, £253 per metric ton.
Cinchocaine: Base (5-kg lots) £77.69 kg; hydrochloride £77.45.
Citric acid: BP per metric ton single deliveries, granular hydrous £739; anhydrous £794; five-ton contracts £735 and £790 respectively, Crystalline £171.17 and £170.17 respectively,
Cihydrocodeine bitartrate: £535 kg in 20-kg lots: Subject to Misuse of Drugs Regulations.
Ephedrine: (Per kg in 50-kg lots) hydrochloride £16.40; to £18 as to makes; sulphate £18.
Glycerin: In 250-kg returnable drums £610 metric ton in 5-ton lots.
Hypophosphorous acid: (Per metric ton in 50-kg lots). Pure 50 per cent £374.20; BPC (30 per cent) £293.60.
Lignocaine: (25-kg) base £11.07 kg; hydrochloride £11.17.
Mercury RPC redistilled £7.10 kg in kg lots

£11.17.

Mercury: BPC redistilled £7.10 kg in kg lots.

Mercurials: Per kg in 50-kg lots; ammoniated £7.48; oxide—red £8.82 and yellow £8.54; perchloride £6.14; subchloride £7.82, iodide £8.10.

Mersaly! Acid £30.50 kg in 10-kg lots.

Methyl salicylate: 5-ton lots £1.26 kg; 1-ton £1.30.

Phenobarbitone: in 50-kg lots £11.62 kg; sodium £12.62.

Quinalbarbitone: Base and sodium in 25-kg lots £19.40 kg. Reserpine: 100-g lots £0.22g.

Crude drugs

Aloes: Cape £1,000 ton spot; £960, cif. Curacao £2,550 spot nominal. Balsams: (kg) Canada easier at £11.25 spot; £11.10, cif. Copaiba: £2.40 spot; no cif. Peru: £6.10 spot £6, cif. Tolu: £5.35 spot. Benzoin: Block No spot; £157 cwt, cif.

Cascara: £1,100 metric ton spot; £1,000 cif.
Chillies: New Guinea birdseye £2,350 metric ton

Chillies: New Guinea birdseye £2,350 metric ton spot.

Cinnamon: Seychelles bark £400 metric ton spot; £360, cif. Ceylon quills 4 o's £0.74 lb; featherings £310 metric ton, cif.

Dandelion: Spot £1,520 metric ton spot; £1,500, cif. Ginger: Cochin new crop £1,090 metric ton, spot; £1,015, cif. Other sources not offering.

Henbane: Niger, £1,600 metric ton spot; £1,570, cif. Ipecacuanha: (kg) Costa Rica £9.20 spot; £9, cif. Kola nuts: £750 metric ton, cif.

Menthol: (kg) Brazillan £9.35 spot; £8.60, cif. Chinese £7.70 in bond; £7.55 cif.

Pepper: (metric ton) Sarawak black £1,125 spot, £1,035 cif; white £1,750 spot; £1,630, cif.

Sarsaparilla: Mexican £1.62 kg spot; £1.59, cif. Jamaican £1.95 spot; £1.92 cif.

Zeeds: (metric ton). Anise: China star £975 spot; £760, cif. Caraway: £850. Celery: Indian new crop £470. Coriander: Moroccan £200. Cumin £860.

Turkish £825. Iranian £795. Dill: Moroccan £230, Indian £525. Fennel: Chinese £240. Fenugreek.

Morrocan £230. Maw: £520; Mustard: English £250-£350 spot.

Morrocan £200. Maw. £320, max. £3 no firm

#### Essential oils

Bay: West Indian £11.26 kg, cif.
Cananga: Indonesian £17.50kg spot; £17.20, cif.
Cinnamon: Ceylon leaf £3 kg spot; £2.80 cif.
Geranium: (cif) Bourbon £45.00 kg, Chinese £28.00.
Ginger: Imported from £28 to £75 kg spot as to source. English-distilled £105.
Nutmeg: East Indian £10.50 kg spot and cif.
Orange: Florida £0.56 kg spot; Brazilian £0.47 cif, spot.

Orange: Florida £0.56 kg spot; Brazilian £0.47 cit, spot.

Palmarosa: No spot offers; £13.25 kg, cif.
Patchouli: Indonesian £10.40 kg, cif.
Peppermint: (kg) Arvensis—Brazilian £5.75 spot, £5.60, cif. Chinese £4.35 spot; £4.35, cif. Piperata American Far West about £21 cif.
Spearmint: (kg) American Far-West £11.50. Chinese £13.25 spot; and cif.

The prices given are those obtained by importers or manufacturers for bulk quantities and do not include value added tax. They represent the last quoted or accepted prices as we go to press.

#### **Classified Advertisements**

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Publication date Every Saturday

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Copy date 12 noon Tuesday prior to publication date. Advertisements should be prepaid.

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Display/Semi Display £5.00 per single column centimetre, min 25mm. Column width 44mm.

Whole Page £350 (275mm×186mm)

Half Page £200 (135mm×186mm)

Quarter Page £110 (135mm×91mm)

Lineage £1.00 per line, minimum 5 lines at £5.00 Box Numbers £0.50 extra.

Series Discounts 5% on 3 insertions or over. 10% on 7 insertions or over. 15% on 13 insertions or over.

#### TRADE MARKS

Trade Mark

Label with tumbler device ANDREWS

ANDREWS LIVER SALT

ANDREWS LIVER SALT

MERRY ANDREWS

Label with tumbler device ANDREWS EFFERVESCENT

The Trade Marks set out below were assigned on 15 November 1977 by Sterling Products International Incorporated of 90 Park Avenue, City and State of New Yord, U.S.A. to Sterling-Winthrop Group Limited of Winthrop House, St Mark's Hill, Surbiton, Surrey in so far as concerns the use of the marks on goods for export to and sale in Cuba

194423	ANDREWS LIVER SALT	A medicinal preparation for human use.
317196	ANDREWS LIVER SALT	A medicated preparation for human use for liver ailments.
441333	ANDY'S	A medicinal preparation for human use.
441608	ANDREWS LIVER SALT	Liver Salt being a medicinal preparation for human use.
504181	ANDREWS LIVER SALT	Liver Salt, being a medicinal preparation for human use.
557857	ANDREWS	A medicated saline preparation for human use for liver ailments.
627532	ANDREWS LIVER SALT	Medicated saline preparations for human use for
	Label with tumbler device	liver ailments.
627533	ANDREWS LIVER SALT	Medicated saline preparations for human use for liver ailments.
655501	ANDREWS	Dry saline preparations (not-medicated) for mak-
		ing non-intoxicating beverages.
671276	ANDY'S	Dry saline preparations (not-medicated) for mak-
		ing non-intoxicating beverages.
679333	ANDREWS EFFERVESCENT	Dry saline preparations (not-medicated) for mak-
	SALT	ing non-intoxicating beverages.
680383	ANDREWS EFFERVESCENT	
	SALT	ing non-intoxicating beverages.
	Label with tumbler device	

liver ailments.

Label with tumbler device ANDREWS EFFERVESCENT Medicated saline preparations for human use for

> Pharmaceutical saline preparations for internal human use.
> Medicated saline preparations for human use for

> Pharmaceutical saline preparations for internal human use Pharmaceutical saline preparations for internal

Haman use.

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